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FORCE INTEGRATION

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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Field Manual
No 100-11

FM 100-11
HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 29 September 1988

FORCE INTEGRATION

Preface

This field manual (FM) describes the doctrine and process of planning, managing, and implementing change in the Army-Force Integration. It is designed to be both philosophical and mechanical in its approach to describing how to deal with change and modernization. ✓

Although those managing change in the field have a strong desire for a publication that spells out a step-by-step procedure of how to do it, this field manual will not satisfy that desire. It does, where feasible, provide milestones, checklists, or tables to assist in developing step-by-step procedures. Each major Army command (MACOM), installation, and division has its own unique operational considerations that would make a detailed set of procedures in a publication, such as this FM, of marginal value. As a result, this manual provides a doctrinal, philosophical perspective that can be tailored to meet specific unit needs.

This FM applies to installations, corps, divisions, separate brigades, and armored cavalry regiments and closely conforms to the Army of Excellence force structure and design initiatives. Application is at the MACOM level since these organizations are deeply involved in corps and division actions.

The proponent of this publication is HQ TRADOC. Users of this manual should submit recommendations and comments on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forward it to the Commander, US Army Combined Arms Center, ATTN: ATZL-SWA-DL, Fort Leavenworth, KS 66027.

Unless otherwise stated, the masculine gender applies to both men and women; however, using the masculine gender is exclusive when referring to a combat environment.

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CHAPTER 1

Introduction—the Army and Change

Quote

✓ Today's Army is undergoing massive changes in doctrine, training, force structure, and materiel. Change is a formidable challenge. It is of such magnitude and scope that it demands much of the individual soldier who must frequently adapt to new and unfamiliar command structures, working environments, procedures, and skill requirements. It is especially demanding of leaders at all levels because they must facilitate the change process in units throughout the Army while simultaneously maintaining the capability of those units to deploy, fight, and win on short notice. They must also dampen the turmoil often associated with change that is in direct conflict with the stability needed to form cohesive, combat-effective units. To overcome these challenges requires leaders and soldiers alike who understand change and possess the management and leadership skills needed to plan for and control it and make it happen.

SECTION I. WHY CHANGE?

✓ In battle a second-best army is a losing army. Armies must be organized, trained, and equipped to deter and, if necessary, fight and win. In today's era of global interdependence an army must be deployable, sustainable, and capable of fighting in any environment. Being the best, however, is an elusive goal because it is measured against an ever-changing array of variables such as economics, politics, and technology.

Emerging from World War II and Korea, the US Army was undoubtedly the strongest army on the earth, but since then, the world has changed drastically. While fighting in Vietnam, the US Army consumed more than a decade's worth of military resources that effectively curtailed most modernization efforts. Improvements in doctrine, organizations, and equipment came to a virtual halt while the US Army fought the war at hand. In the

years following the Vietnam conflict, modernization of the US Army remained stalled as the nation reduced its investment in defense. The US Army thus began the 1980s with doctrine, organizations, and equipment designed for the world and battlefield of the 1960s.

During this period, however, the world and the threat did not stand still. The world has slowly become one of global interdependence characterized by instantaneous, world-wide communications, multinational corporations, world monetary crises, limited critical resources, and international terrorism. Yet the technology that helped to foster global interdependence has also made today's battlefield an increasingly deadly place.

Lasers, microprocessors, computers, and other new technologies have significantly increased the lethality and tempo of battle. The 1973 Yom

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Kippur War vividly demonstrated this fact. In a war that lasted only 18 days, men and materiel were expended at a staggering rate. The rival armies were armed with the latest weapons systems available. This also illuminates how the military balance has changed since World War II. The world has armed itself so extensively since then that significant military forces are no longer the sole preserve of the superpowers. The armed forces of many Third World nations are equipped with highly sophisticated weapons systems made possible by the sale of oil or other scarce natural resources. Small countries no more populous than a United States or Soviet city are now capable of an immense military effort.

While US Army modernization efforts stalled during and after the Vietnam conflict, the Soviets have grown more powerful and deadly. The US' economy has become more than 50-percent dependent on foreign sources for 23 of 40 critical materials (such as oil and minerals). The Soviet Union is totally independent of foreign sources for 35 of such critical materials (Figure 1). The

USSR has also consistently devoted a larger portion of its gross national product (GNP) to improving its military capabilities both quantitatively and qualitatively. Their military buildup has been relentless in comparison to US efforts (Figure 2).

From 1960 to 1980, the only US Army tank fielded was the M60-series tank. During the same period, the Soviet army fielded the T54-, T55-, T62-, and T72-series tanks in great numbers. Each of these tanks included increased levels of sophistication in firepower, protection, and mobility. The realities of this buildup were demonstrated during the Soviet invasion and occupation of Afghanistan with four well-equipped divisions. The invasion was accomplished within a few days with a barely visible tactical buildup. Simultaneous with the invasion of Afghanistan, the Soviets fully manned the NATO and Sino-Soviet borders.

All of these factors add up to a single imperative. To remain a credible force, now and in the future, the US Army must continue to change. It must be prepared to fight the next war, not the last war.

Figure 1. United States and USSR resource dependency comparison.

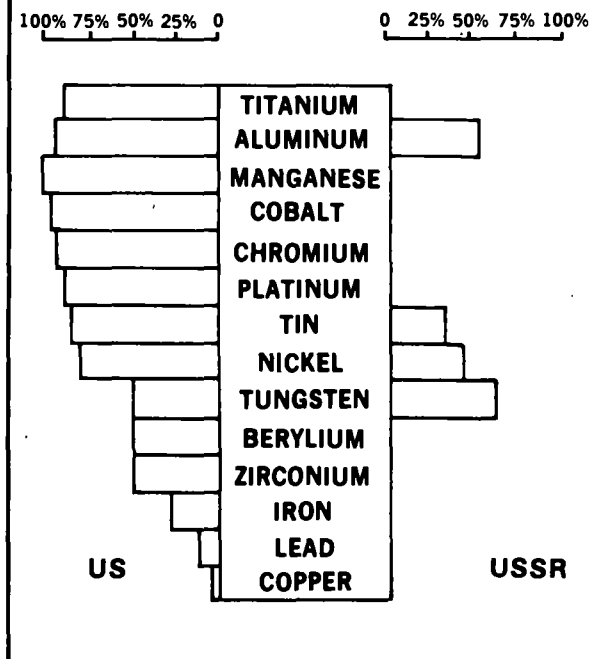
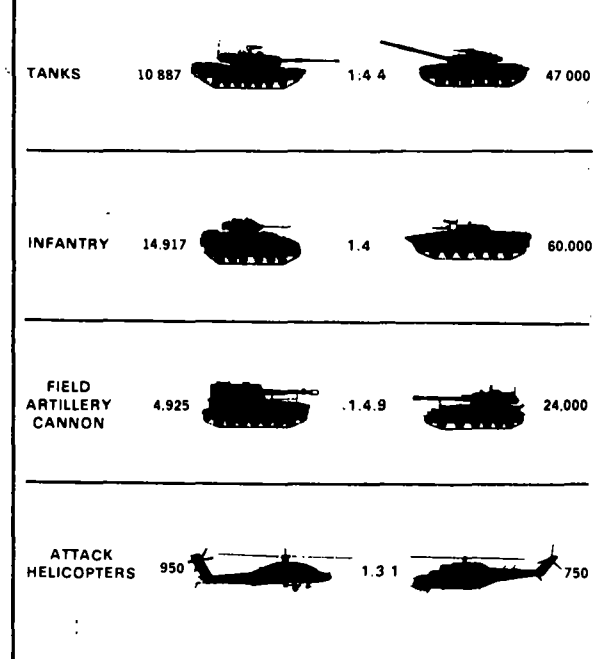


Figure 2. United States and USSR quantitative disparity.



SECTION II. HOW TO CHANGE

The need to establish and maintain an army capable of deterring aggression and protecting the national interest creates a serious dilemma. The United States does not have the resources to match the threat soldier-for-soldier and tank-for-tank and still maintain its standard of living and democratic institutions. While some quantitative improvements are possible, most are not. The limits on manpower and dollars are real. The preferred course of action has become a qualitative approach--beat the enemy, not with a bigger force, but with a better force.

To build and maintain a quality force requires that all the elements that influence its combat effectiveness be addressed. This is the "total system" approach. By addressing each element as part of a whole system, the overall effect is magnified with the desired result being, in the case of the Army, a single military force much more capable than the sum of its parts or elements. Those critical elements are doctrine, equipment, organizations, personnel, and training (Figure 3).

Doctrine

How the Army intends to fight, or doctrine, is the driving element of the total system. Prior to defining equipment and organizational requirements, there must be a concept of what is to be

accomplished on the battlefield and how that is to be done. Once that is established, organizations to accomplish those tasks can be designed and necessary equipment and personnel can be identified and procured.

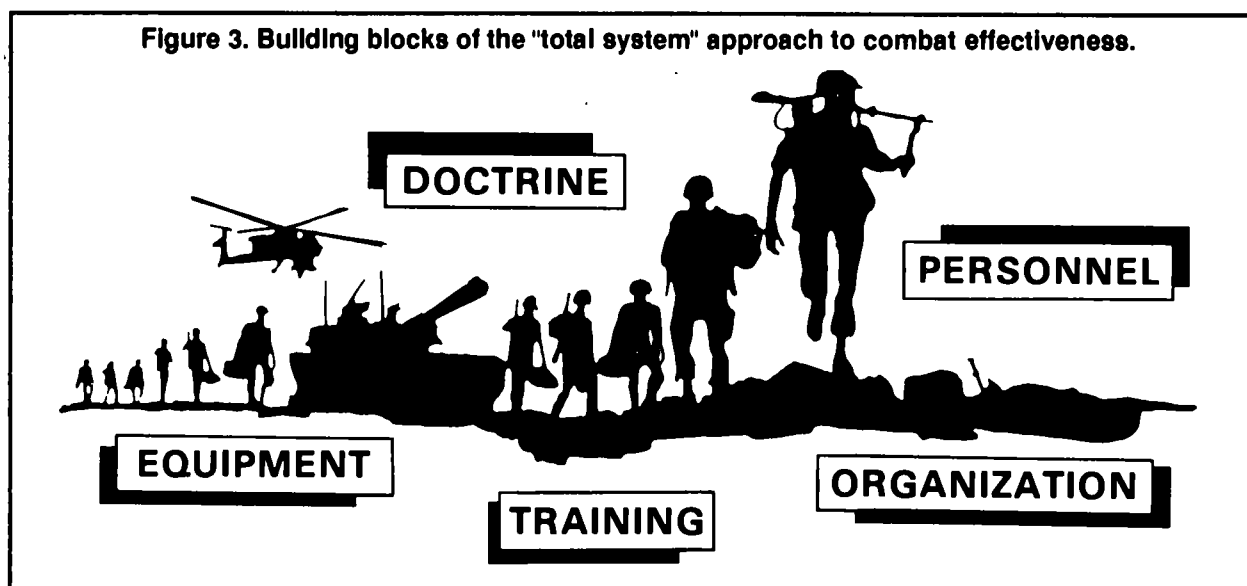
Equipment

The application of hardware to the battlefield has always had a profound effect on warfare--the longbow at Crecy, the tank at Cambrai, the helicopter at Ia Drang. The role of technology in shaping today's army is no less important. It is a key factor in saving critical manpower resources. By making each soldier more mobile and lethal, the force can actually increase its overall capability while decreasing manpower levels. Technology is not a simple solution, however. It does not come cheaply. Numerical manpower savings are often offset by increased quality requirements. Also, equipment alone does not win battles. The ability of soldiers to operate a weapon and the effectiveness with which a commander employs it ultimately determine its impact on the battlefield.

Organizations

Army organizations should reflect its doctrine, soldiers, and equipment. Organizational design

Figure 3. Building blocks of the "total system" approach to combat effectiveness.



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should, in fact, enhance the doctrine's utility by creating unit structures that combine soldiers and equipment in a manner compatible with the doctrine. Additionally, these units must be combined into a synergistic force structure capable of implementing doctrine. Failing to do these basics can render even the most well-reasoned and potentially effective doctrine useless. For example, it is difficult to conduct rapid, mobile battlefield operations with large cumbersome organizations.

Personnel

Soldiers are the power behind the Army. Without them, it is merely a collection of ideas and machinery. People make the ideas happen and the machinery work through both their natural and acquired abilities. It is imperative therefore that soldier considerations be addressed early in the development of doctrine, equipment, and organizations. There is little value in turning a costly high-tech weapon system over to a person incapable of learning to operate and maintain it properly.

Training

The Army's main function in peacetime is to train soldiers and units in the skills of combat so that when war comes they are prepared to fight and win. The potential of doctrine, soldiers, equipment, and organizations is only realized through training efforts.

In attempting to make up for two decades of neglect, current modernization efforts have wrought substantial changes in all of these areas at a rapid pace. These include major doctrinal adjustments, the introduction of a new generation of high-tech battlefield systems, the restructure of all heavy divisions and the creation of new light divisions, and the use of a new unit replacement or rotation system. All of these efforts have been positive in design but, when taken

collectively, have also caused problems. The problems are generally a result of three factors:

- The vertical distribution of responsibilities when planning for or implementing change.
- The "hit-and-miss" approach to assimilating change within the Army.
- A lack of knowledge about how the Army runs.

The Army has traditionally fragmented the responsibility for each of the "total system" building blocks—doctrine, equipment, organizations, personnel, and training—into separate vertical stovepipes. While this specialization makes for better management of each element, it does not address the complementary effect that they have on each other. Dealing with each element in isolation leads to problems when implementing change—equipment does not support the doctrine, people cannot maintain the equipment, and so on. Correcting these problems requires a broad horizontal perspective, an approach which most Army management headquarters are not well organized to accomplish. Even if this were the case, however, an insufficient understanding of the systems and procedures that man, equip, structure, and train the Army would be a hindrance to implementing this total system approach. Leaders and managers throughout the Army, while experts in their own assigned areas, often have little or no knowledge of how they influence or are influenced by other areas. This deficiency is compounded by the fact that no set of guidelines or doctrine exists on the total system approach to planning, managing, and implementing change. This field manual was written to help fill that void. It will address the doctrine and process of planning, managing, and implementing change—**FORCE INTEGRATION**. Its focus is at the corps or division level where concepts and reality come face-to-face.

SECTION III. FORCE INTEGRATION

TOP Force integration is the introduction, incorporation, and sustainment of new doctrine, organizations, and equipment into an existing force structure. It is a multidimensional approach to

managing the wave of change that the Army is experiencing at every level. It deals with doctrine, organizations, people, equipment, and training in an interrelated manner, from introduction through

"ownership." Ownership is that state when change has been fully accepted by soldiers and their leaders and when new becomes routine. Force integration allows organizations to look at change in a comprehensive, logical fashion and to internalize those changes and the new capabilities involved with minimal disruption to current operations and capabilities.

The term "force integration" has recently achieved a degree of prominence as the Army has scrambled to gain control of its modernization effort, but force integration is not new to the Army. At the risk of oversimplification, force integration is a process that armies have been using since their creation—assimilating change to doctrine, organizations, and equipment in order to remain a capable force. There is much to be learned from those experiences that can be applied today.

Probably the best example of an army transformed from the inside out by force integration is that of the German army from 1916 to 1917. It is especially valuable for study because the diverse conditions and compressed timeframe under which it was accomplished serve to accentuate some important lessons. Faced by a tactical stalemate on the Western Front, Allied forces had sought ways to break the deadlock. They tried strategic solutions (Gallipoli), technological solutions (the tank), and finally in 1916-17 an operational solution: Using vast quantities of munitions concentrated in a small area, they attempted to create a penetration in the front that could then be exploited.

The German army responded to this Allied use of mass firepower by developing and implementing, prior to the Allied 1917 spring offensive, an elastic defense-in-depth doctrine. It was designed to exploit Allied weaknesses in mobility by allowing them to expend the energy of their attacks while the German army conserved its energy for subsequent counterattacks. The entire process, including reorganization, introduction of new equipment, and training according to these new defensive principles, was accomplished in only seven months despite severe economic and manpower constraints. At the close of their 1917 offensive, the Allies had gained little ground and had expended much blood and materiel, while the Germans had conserved enough strength to continue the war into 1918. How did they do it?

First, they understood the crucial role played by doctrine in giving direction to the efforts of an army. Doctrine is an army's collective vision of how to fight. It must be sufficiently general to apply to a variety of tactical conditions, yet sufficiently precise to ensure common understanding and unity of effort. Second, they understood the complementary nature of doctrine, organizations, equipment, and the soldiers who employ them. Success on the battlefield results from an enlightened mixture of all four by aggressive, imaginative leadership. Organizational and materiel developments cannot be successfully exploited without a compatible doctrine. Even the best weapon can be rendered useless by improper employment, as demonstrated by the Allied use of tanks in 1916. Finally, the Germans understood that new doctrine, organizations, and equipment were useless unless training could instill in soldiers and their leaders the necessary standards of performance in employing them. One of the most influential German military figures to emerge during World War I, General Erich von Ludendorff, underscored this point when he wrote that "orders on paper were of themselves useless, they had to be pounded into the flesh and blood of officers and men." How to fight had to be taught and reinforced at every tactical level until that knowledge had been accepted and internalized.

The US Army has been no stranger to extensive change, especially since 1940. As the German mechanized Blitzkrieg raced across France in that year, the US Army was conducting maneuvers at home that included two horse cavalry divisions. At that time, the US Army was a shell of what it would be by 1945. It had a total strength of only 190,000 officers and men organized into 11 understrength divisions. They were armed with M-1903, bolt-action Springfield rifles and light tanks mounting nothing larger than .50-caliber machine guns. By 1945, the United States boasted a world-class army with a total strength of 2,502,000 officers and men organized into 90 divisions. The standard infantry rifle was the .30-caliber semiautomatic Garand—the best infantry shoulder arm of World War II. Armored forces were equipped with a variety of M4 Sherman medium tanks, some mounting high-velocity, 76-millimeter guns. This transformation, which took place between 1940 and 1945, was as impressive

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an achievement as any in military history. It marked the beginning of an Army with global responsibilities. Since then, the Army has been constantly evolving and changing to effectively fulfill those responsibilities. While no single factor has driven these developments, the changing capabilities of potential adversaries have profoundly affected the Army's doctrine as well as its organization and equipment. That is why potential conflict in Southeast Asia in the early 1960s shifted the Army's focus from the nuclear battlefield and pentomic division to airmobility and the air assault division.

Given past history, some general conclusions about change and military forces may be drawn. The first is that change is not an abnormal state,

but rather a normal one. If a force wishes to remain effective in a changing environment, it must also change. Second, efforts to change a force will often be wasted unless there is a doctrinal framework to provide for direction and unity of effort. Finally, concepts can only be translated into reality through training and understanding. These lessons can be distilled into the following basic assumptions that will serve as a foundation for force integration doctrine:

- Change is a normal state.
- Doctrine is the standard against which change is measured.
- Training is the method for incorporating and sustaining change.

CHAPTER 2

Cornerstone—How the Army Intends to Fight

✓ **D**octrine is the cornerstone of force integration. As the Army's collective view of how it intends to fight, doctrine provides a common reference point against which change can be measured. It provides the Army with a common language and purpose that serve to unite the actions of many diverse elements into a team effort. It also influences the development of organizations and weapons systems by establishing potential functions and parameters of employment. For these reasons, doctrine, and especially changes to doctrine, should be treated with caution and respect.

No doctrine is workable unless it can be applied. To accomplish its desired effect, doctrine must rely upon other elements of the total system—organizations, equipment, personnel, and training. To understand force integration requires an understanding of what doctrine is, how it is developed, and how it influences the other elements of the total system.

SECTION I. DOCTRINE, TACTICS, TECHNIQUES, AND PROCEDURES

The term doctrine is often used to describe all material that outlines how the Army should fight from theater army to squad level. This approach tends to obscure the purpose of doctrine, which is to provide broad guidelines for action. Further definition of those guidelines for specific organizations and situations is accomplished through the development of tactics, techniques, and procedures. To truly understand doctrine requires an understanding of these terms as well.

Doctrine

✓ *TOR* Headquarters, Department of the Army (HQDA), officially defines doctrine in JCS Publication 1 as "fundamental principles by which military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application." Doctrine simply

describes how the Army wants to do things on and in support of the battlefield. How it is applied is left up to the commander on the ground. Consider the following doctrinal principle as an example:

Maintain a reserve. (DOCTRINE) The commander will normally retain a reserve during offensive operations. The reserve should be about a third of the force and should be used to influence operations at a decisive point or to reinforce main and supporting attacks.

How a commander carries out a doctrinal principle is described by tactics, techniques, and procedures.

Tactics

Tactics supplements doctrine. It is defined in JCS Pub 1 as the "the employment of units in combat," which refers to both what actually happens in

Chapter 2

combat and what should happen. With respect to the latter, it is a theoretical approach to employing a unit or units to achieve the best possible results. Using the previous example of a doctrinal principle, assume a division commander has been given the mission to attack:

Two brigades make the main attack with one brigade in reserve. (TACTICS) The division commander has analyzed the factors of mission, enemy, terrain, troops, and time available (METT-T) and decided how best to designate and plan for the use of that reserve.

The detailed methods to be used by the reserve brigade in carrying out its assigned missions are techniques and procedures.

Techniques and Procedures

The efficiency of units being employed in combat is improved by establishing techniques and procedures to ensure uniformity of action. Techniques are officially defined as "methods of performance of any act, especially the detailed methods used by troops or commanders in performing assigned tasks." Procedures can be defined as particular courses or modes of action that describe how to perform certain tasks.

Consider the brigade commander assigned the mission as a division reserve:

Reserve brigade will follow the division along several axes of advance. (TECHNIQUE) The reserve brigade commander has decided to use this method to perform his mission as division reserve. It gives him the flexibility to carry out a major action as a whole brigade or to reinforce with separate battalions.

Brigade units moving along attack routes will follow standing operating procedures (SOP) for route movement. (PROCEDURE) The brigade commander is referring to a specific set of actions or drills that units have practiced to improve performance and speed of execution. These include, for example, how tank platoons react to high-performance aircraft attack:

1. Voice alert over radio.
2. Platoon accelerates without delay.
3. Tanks move obliquely to the direction of movement.
4. Distance between tanks is increased.
5. Tank commanders prepare to fire upward in the direction of the reported air attack.

SECTION II. DOCTRINE DEVELOPMENT

✓ Army doctrine is derived from approved operational concepts. Concepts are ideas that are essentially notional and represent the best thoughts on how to perform one or more battlefield functions. They usually begin as the result of a perceived problem. This concept exploration is contained within the framework of a formal system—the Concept-Based Requirements System (CBRS) (Figure 4). The US Army Training and Doctrine Command (TRADOC) is responsible for CBRS.

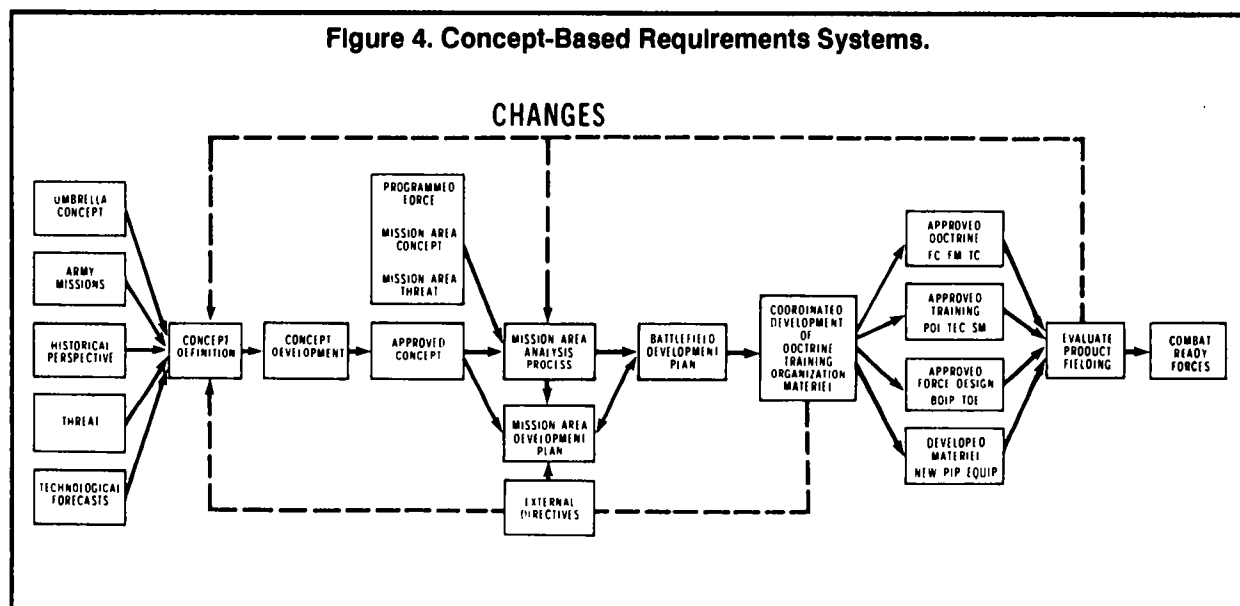
* The CBRS is designed to introduce order into the decision-making process that determines how the Army will fight on future battlefields. For many years, these decisions were often made as a result of materiel acquisition decisions. It was a very narrow approach that did not consider the broad range of factors that influence a military force's combat effectiveness. The CBRS introduces a more logical approach. It determines the

best way to fight on future battlefields by considering—

- What the Army must do.
- How it was done in the past.
- Capabilities and shortcomings of potential enemies.
- Future capabilities that might be available to either side.

This broad operational concept or umbrella concept is subjected to rigorous examination at all levels within the Army. Once approved, or even before, the umbrella concept becomes the basis for further development of functional concepts (maneuver, fire support, air defense, et cetera). Approved concepts are published in the TRADOC 525-series pamphlets.

Figure 4. Concept-Based Requirements Systems.



The writing and publishing of concepts are not ends in themselves; rather, they are the means for identifying further doctrine, equipment, organizations, and training requirements. The methodology used to identify these requirements is called mission area analysis (MAA). Mission area analysis is an assessment of the capability of a force to perform on a particular battlefield or within a functional area. The analysis is designed to discover deficiencies. It stresses doctrinal solutions, followed by training, organizational, and lastly, materiel solutions. Mission area analysis also provides a basis for applying advanced technology to future Army operations. A study group at the proponent TRADOC center or school performs the MAA once every three years. Current mission areas are—

- Combined Arms.
- Close combat, heavy.
- Close combat, light.
- Fire support.
- Air defense.
- Communications.
- Command and control.
- Intelligence and electronic warfare.
- Combat support, engineer, and mine warfare.

- Combat service support.
- Combat support, NBC.
- Aviation.
- Special operations.

All MAA results are assembled by each proponent into a Mission Area Development Plan (MADP) that lays out proponents' strategy for solving mission area problems. The deficiencies that MAA identifies as requiring HQDA visibility and assistance in solving are integrated and prioritized into the Battlefield Development Plan (BDP). The BDP provides guidance to focus, prioritize, and integrate TRADOC efforts in support of current and future Army missions.

The completed MADP and BDP provide direction for writing doctrine, developing training programs, initiating changes in organization structure, and developing new materiel systems. The sequence—doctrine changes, training changes, organization structure changes, and new materiel system development—reflects the intent to fix the deficiencies identified in the MAA based on affordability. As a first choice to meet identified deficiencies, doctrine changes are the least expensive option; next, training changes; then organization structure changes; and, finally, new materiel systems are initiated to provide the fix.

Chapter 2

The requirement to write new doctrine, established by the MADP and BDP, is accomplished by subject-matter experts (SME) within the TRADOC school system. They develop approved concepts into draft field manuals. These manuals

proceed through coordinating and final drafts in a standard manner that ultimately produces an approved and published field manual. This published doctrine is then used throughout the Army to develop tactics, techniques, and procedures.

SECTION III. DOCTRINE PUBLICATION

Doctrine is published according to the annual Armywide Doctrinal and Training Literature Program (ADTLP). This program lists all doctrinal literature projects scheduled for completion during the ensuing two fiscal years. Proponent service schools are responsible for writing and preparing doctrinal literature for print. Doctrine is normally published in DA field manuals or as training circulars. Other means of disseminating doctrine include TRADOC 525-series pamphlets, battle reports, and coordinating drafts.

A clear distinction must be made between the management and actual writing of doctrinal literature. The managers are principally interested in producing the required product in the required format at the required time. The writers are principally concerned with the subject matter. The ADTLP manages field manuals (FMs), Army training and evaluation programs (ARTEPs), and training circulars (TCs).

An FM is defined as a DA publication containing doctrine prescribing how units function in terms of mission, personnel, and equipment. It serves as the primary means of disseminating tested and DA-approved doctrine. The preparing agency reviews FMs every 18 months to ensure doctrinal sufficiency. Field manuals are written and

prepared by appropriate service schools. Coordinating drafts are distributed early in the production process to solicit field comments. Users are responsible for providing comments or recommended changes to the preparing agency.

The ARTEP provides the framework for training units and evaluating performance of assigned missions. It establishes combat-critical tasks, realistic battlefield conditions, and minimum standards of performance based on doctrine, organizations, and equipment considerations. It is written and prepared by appropriate service schools and is managed like an FM.

The execution of doctrine requires that techniques, procedures, or instruction be developed to train individuals and units to perform the functions doctrine prescribes. Training circulars teach standardized techniques, procedures, and drills. They also include training methods. Of these, drills are of particular importance, providing the link between individual and collective training at the crew, squad, section, and platoon level. Their mastery should lead to instinctive and spontaneous execution of techniques and procedures required on the battlefield. The appropriate proponent school writes and prepares TCs as techniques and procedures change to support approved doctrine.

SECTION IV. CURRENT DOCTRINE

The Army's current operational concept is called AirLand Battle doctrine. It was developed as the best way for the Army to fight and win on the next battlefield. On that battlefield, the Army is expected to face a determined enemy who is willing to use every weapon at his disposal to sustain rapid movement during the

offense. Breaking or restraining the enemy's initial ground attacks will not end hostilities. Campaigns of considerable movement and lethality will be commonplace, resulting in a highly fluid, nonlinear series of rapid, violent battles. Small units may find themselves bypassed or encircled by enemy forces.

Success on the AirLand battlefield will depend on the ability of forces to—

- Seize and retain independence of action (INITIATIVE).
- Use the entire depth of the battlefield to strike the enemy (DEPTH).
- Act faster than the enemy (AGILITY).
- Coordinate all battlefield assets to achieve maximum combat power at decisive points (SYNCHRONIZATION).

Beyond these basic tenets, AirLand Battle doctrine provides a more specific set of guidelines to enhance its battlefield application.

Unity of effort. Unity of effort is the harnessing of every force and capability available to ensure attainment of the mission. Air, ground, and naval forces must cooperate fully. Elements of the ground force must understand the overall operation

objectives. They must know their own parts in the operation as well as those of their neighbors if they are to fight effectively. This requires the use of mission orders and the application of mission-oriented tactics.

Designating and sustaining the main effort.

One unit within a force makes the main effort and becomes the focal point for combat, combat support, and combat service support efforts. Agility is derived in part from the ability to shift this main effort as appropriate during the battle.

Sustaining the fight. Forces must maintain the tempo of the battle through combined arms cooperation.

Using terrain and weather. Skillful use of these natural elements enhances combat power.

Protecting the force. Preserving the force's strength maximizes combat power availability at the decisive place and time. This applies to activities as diverse as proper medical care and rear operations.

SECTION V. UNIT ROLE IN DOCTRINE DEVELOPMENT

Doctrine development does not end with an approved operational concept or field manual. Doctrine may emerge from theory, but it must be proven under fire or, if that is not possible, under rigorous training conditions. The validation of doctrine can only be done where the action occurs—at unit level. Small-unit leaders tend to view the doctrine development process as being far removed from their sphere of influence or interest, which is not true. While TRADOC is officially assigned the responsibility for doctrine development, in reality every leader and soldier shares in that responsibility.

Because of its interrelationship with equipment, organizations, personnel, and training, doctrine is in a constant state of evolution. Nowhere in the Army is this more apparent than at the division level where it all comes together. New ideas and changes to old ideas cannot be isolated within a battalion or division. If a new tactic or technique is good enough for use within a single unit, then it should be shared within the Army at large. Therefore, new doctrine, including tactics, techniques, and procedures, is regularly staffed with field units. The importance of field comments at this time in

the development cycle cannot be overstated for doctrine must be workable. A doctrine that cannot be applied will only compound an army's misfortune. Those who write doctrine within TRADOC do not have all the solutions. If there is a better way, it must be addressed. Feedback is critical to keep doctrine current and effective. This is especially important during periods of substantial change.

It is at this point that problems arise. How does a division, brigade, or battalion, not resourced as an official player in the doctrine development process, find the time and personnel to participate? The answer is to integrate doctrinal considerations into the routine business of a unit. New and emerging doctrine, tactics, techniques, and procedures should be—

- Reviewed by senior leader councils.
- Reviewed and discussed as part of officer and NCO professional development programs.
- Tested in regularly scheduled training exercises.

Chapter 2

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201 A change in doctrine requires leaders and soldiers at all levels to adopt new ways of thinking. This change of mindset is the most difficult aspect of implementing a new doctrine and must be handled first, starting with the division's senior leadership. Impending doctrinal changes should be discussed by them to establish a common understanding of what the change is, surface issues which require further resolution, and set the strategy for implementation within the division. That strategy should include use of the division's professional development program to transmit information about the change to subordinate leaders and soldiers. This kind of action will help to "sell the change" and stimulate further discussions. These discussions will enhance the top-to-bottom flow of information and surface a more detailed set of issues and impacts which can be expected upon implementation. Few doctrinal changes are made without having to be fine-tuned. They must often be modified prior to and during implementation. A division should always consider this modification process to be a natural part of assimilating doctrine.

The actual implementation of a new doctrine should be approached incrementally as part of the division training program. It should be a routine, planned part of the division training program. It should begin with the professional development program, proceed through wargaming and command post exercises, and ultimately be integrated into field training and evaluations. Feedback from all of these activities should flow back up the chain of command to promote adjustments to doctrine. For example, feedback from unit exercises at the National Training Center (NTC) has been invaluable in refining AirLand Battle doctrine.

The results of these efforts should then be forwarded to the appropriate proponent school or TRADOC point of contact (POC). The format is not of critical importance—substance is. The results may be in the form of SOPs, after-action reports, or issue papers. In order to facilitate

communications between field units and TRADOC proponent schools, a POC program has been established.

An additional method to gather information on doctrinal change and to identify new or modified training requirements is through evaluation of units in the field by branch training teams (BTT). When evaluations are accomplished in conjunction with force integration initiatives, they are normally conducted in association with major system fieldings or unit reorganizations. This process produces information that provides immediate input on the status of current doctrine to the proponent branch school. This is a single, low-cost way for units in the field to influence doctrine development.

The Doctrine Point of Contact Program defines relationships between designated elements and units of US Army, Europe (USAREUR), US Army Forces Command (FORSCOM), Eighth US Army (EUSA), and US Army Western Command (WESTCOM) in support of an informal doctrinal interface program. It serves as an excellent means for TRADOC doctrinal proponents to access MACOM POCs and their designated using units. It promotes the discussion of doctrinal initiatives and the exchange of ideas relative to other aspects of doctrine development. It also facilitates field-user feedback and input of good ideas while promoting, on an informal basis, a general exchange of information regarding a wide range of doctrinal issues. Armywide organizations and activities are encouraged to use the program as a rapid means to receive informal responses concerning doctrine development while surfacing ideas and initiatives. The MACOM POCs are authorized direct communication with other participating MACOM counterparts for the purpose of exchanging information. Informality is stressed to promote timeliness in identifying good ideas, since official positions require formal coordination and may delay the timely application of new concepts and ideas.

CHAPTER 3

Foundation—How the Army Runs

The successful integration of new doctrine, organizations, and equipment into the current force requires the synchronization of multiple levels of command and diverse management structures and systems. This cannot be accomplished unless leaders at all levels understand as much about how the Army runs as they do about how it intends to fight. Force integration involves a series of interrelated actions, both horizontally and vertically across the Army. The actions, which must be integrated to build a more capable force, are essentially those that structure, man, equip, and train units. Doctrine, organizations, people, equipment, and training are inexorably linked in building a combat-ready force; however, the management structures and systems that support them are not. Knowledgeable leadership is required to provide that linkage. This chapter is meant to assist in that effort. It is intended as a primer on how the Army runs.

SECTION I. ARMY LIFE CYCLE MODEL

An organizational chart is the conventional way of depicting the principal components of a large, complex organization such as the Army. It shows patterns of relationships by prescribing a hierarchy of organizational elements (Figure 5).

There are weaknesses in using this approach. Actions such as fielding a new tank with all essential support, including parts, support equipment, trained operators, and facilities, impacts across several organizational boundaries and cannot be adequately understood using an organization chart. A systems approach is a better method to explain these complex relationships. There is one basic systems model that is useful in this case. It describes a system as consisting of an input, a series of transformation activities, and an output. The army can be dissected using this model (Figure 6).

In a dynamic relationship with a free society and representative government, the Army receives various inputs, transforms these inputs in a variety of ways, and provides output. By law the Army is required to be organized, trained, and equipped

Figure 5. Organizational chart.

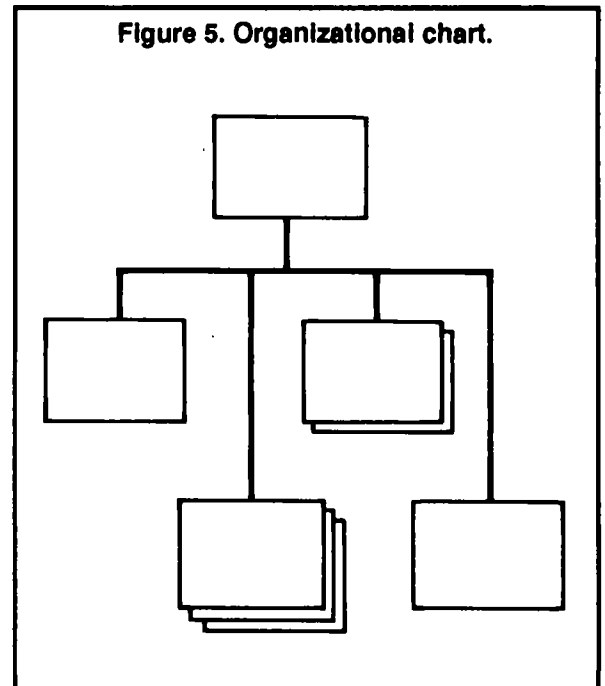
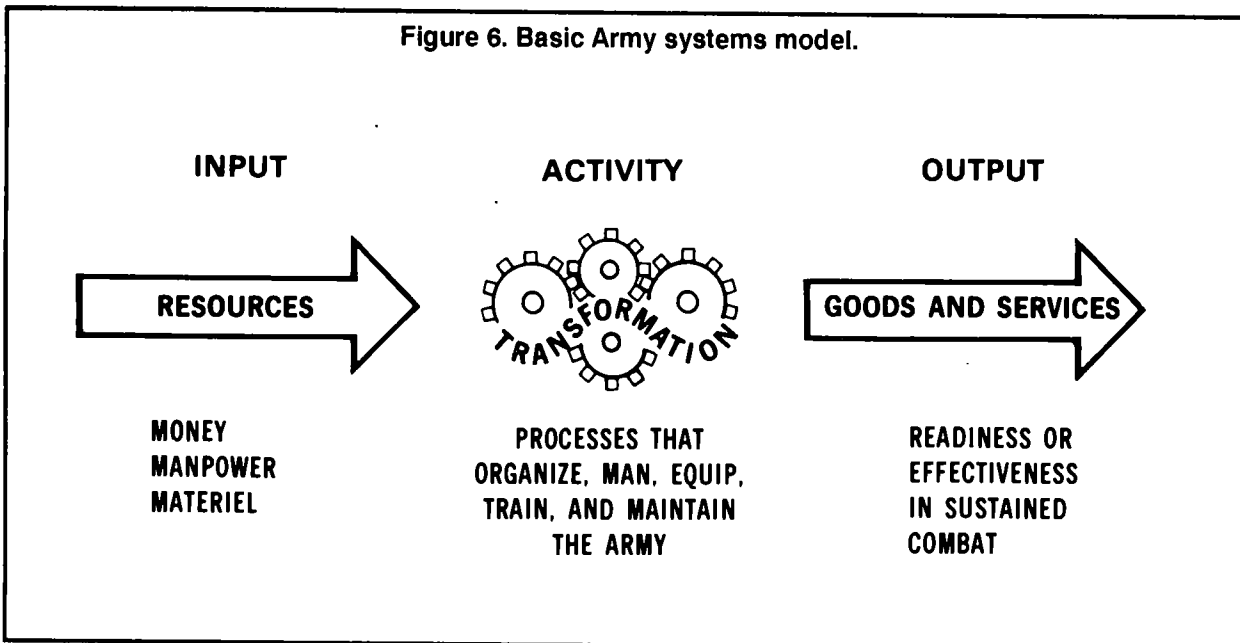


Figure 6. Basic Army systems model.



for prompt and sustained combat. Approached systematically, this is accomplished by taking people, materiel, and money (INPUT) and converting them through organization and training (TRANSFORMATION ACTIVITY) into a force capable of successfully defeating an enemy in combat (OUTPUT). When not engaged in actual combat, this ability is measured in terms of readiness.

Threat capabilities and national security objectives change and the system must adapt and compensate for these changes. It is vital to the internal health of the system that information be fed back to the Army's leadership to effect necessary changes and adjustments. Information in the form of readiness reports, inspections, surveys, et cetera, measures the effectiveness and efficiency of the internal transformation processes and the system itself and forms the basis for corrective actions.

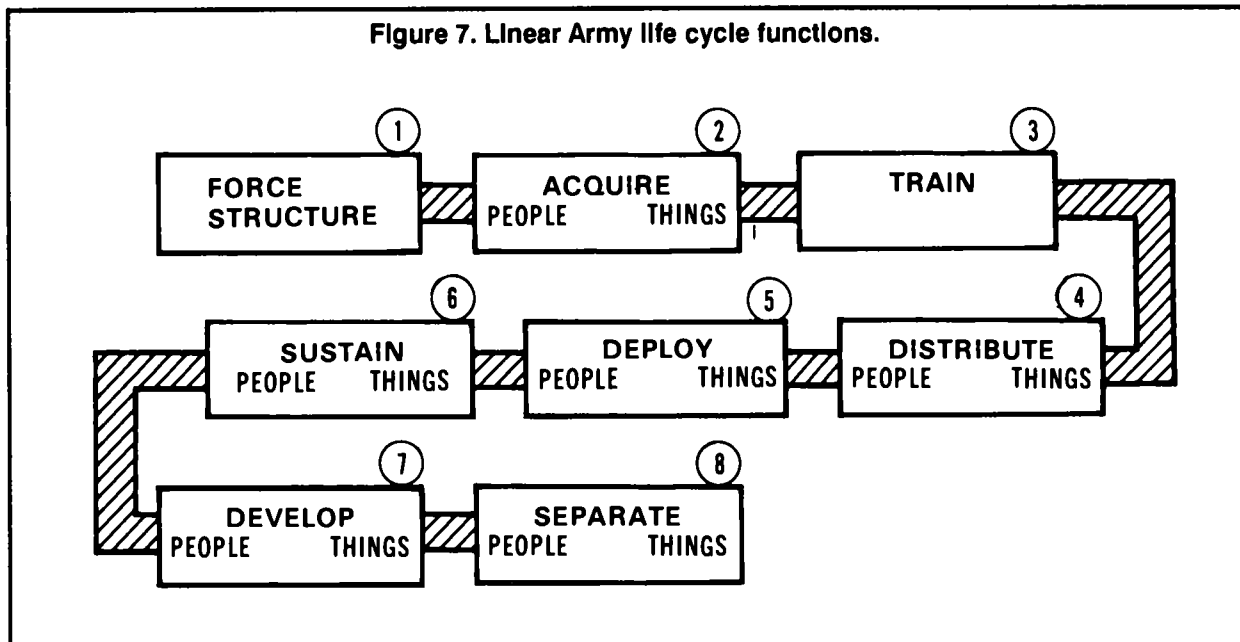
With this basic understanding of the systems approach to building or changing organizations, it is possible to examine the Army's internal transformation processes that create a combat-ready force. For simplicity, assume that the Army does not exist and must be raised by Congress. The first action necessary is to determine what kind of force is needed. Based on operational concepts, doctrine, mission, threat, and resources available, a **FORCE STRUCTURE** is designed. Next, people and materiel are **ACQUIRED** to support that

structure. The people must then be transformed into soldiers. They must be taught the discipline, drill, and practices of the military through **TRAINING**. (Remember, for future reference, that training in this context is initial-entry training.)

Having produced soldiers and provided them with basic skills and knowledge, they and the required equipment are then **DISTRIBUTED** to claimant organizations within the force structure. Because all of the soldiers and equipment are not necessarily available at the same time, they are distributed to those organizations on a mission-priority basis. The next step is the movement or **DEPLOYMENT** of those organizations to various locations in accordance with assigned missions and commitments.

In peace or war, the arrival of units, soldiers, and equipment establishes a requirement to **SUSTAIN** them. This includes sustaining unit and soldier proficiency through training and also the replacement, repair, and rotation of soldiers and equipment. While sustainment maintains a level of performance, the opportunity exists to improve or **DEVELOP** soldier and equipment capabilities beyond those levels. A soldier can be developed through educational and training programs. Equipment can be developed through product-improvement programs. Finally there comes a time when there is no more need for those soldiers

Figure 7. Linear Army life cycle functions.



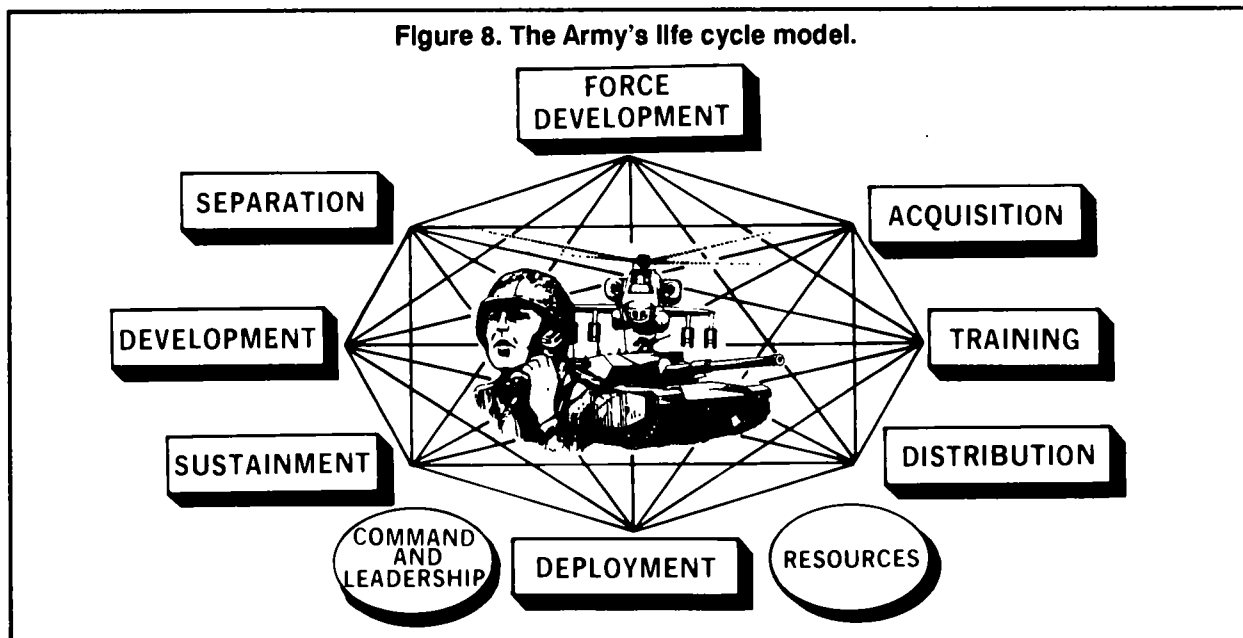
and equipment. They are then SEPARATED from military control.

Linear Army life cycle functions (Figure 7) represent a one-time, birth-to-death life cycle system. In reality though, because the Army is in a constant, never-ending process of building and rebuilding, with all of these functions occurring

concurrently, a better representation of the actual relationship is shown in Figure 8.

Because the life cycle actions do not occur in isolation, feedback loops have been added. The actions are also arrayed in a circular, rather than linear, fashion to better depict the never-ending and far-reaching nature of the process. In place of

Figure 8. The Army's life cycle model.



force structure, the term "force development" has been used because it better describes the process with a force in being. Finally, two important inputs to the system have been added—resources (time, money, people, materiel), to energize the system; and command (or leadership), to provide direction. This model is an excellent tool to help soldiers at all levels within the Army to better understand how, on a day-to-day basis, the Army runs.

Force integration occurs within the framework of this model at several levels.

- **Conceptual.** Ideas about how to fight are generated within TRADOC. These ideas influence doctrine development as well as organizational and equipment design. They result from the CBRS. Everything else that is done in creating a more capable force should fit within the "how-to-fight" doctrine established at this level. Doctrine is the basis for subsequent structuring, equipping, manning, and training actions.
- **Technical.** Management actions necessary to translate ideas into reality occur within the Army Staff (ARSTAF). They include force structure design and documentation, materiel and personnel acquisition, and programming and budgeting dollars. Even though most of these actions are administrative, they must not detract from the how-to-fight focus established earlier. If resource constraints make this necessary, then the original concept should itself be adjusted.
- **Mechanical.** Force integration at this level involves the coordinated movement of

soldiers, equipment, and associated support to a required location. It begins with the ARSTAF and involves every level of command and management. All of this must be synchronized to obtain the desired effect without disrupting ongoing training and support programs. How organizations are structured and function to accomplish this efficiently and effectively are important factors which deserve command attention.

- **Training.** The actual planning and execution of a combined arms, multiechelon training program is the heart of force integration at the division level. This is where units internalize change. It should not be done at the expense of ongoing sustainment training, but rather in conjunction with it.
- **Ownership.** Once a change has been made, it must be sustained. This requires acceptance by leaders and soldiers and depends on training. Follow-up and feedback are necessary to ensure that this happens.

The division bears the responsibility for the mechanical, training, and ownership levels of force integration. As such, it is dependent on higher headquarters. The HQDA and MACOMs are responsible for establishing concepts, developing structures, and planning and programming resources at the conceptual and technical levels. How that is accomplished has been explained in general terms using the Army's life cycle model. Several of those key functions of particular importance to force integration will be more fully explained in the remainder of this chapter.

SECTION II. FORCE DEVELOPMENT

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Force development is the foundation for all other actions in the Army system. Its purpose is to develop a force structure within constrained resources capable of deterring or defeating a perceived or real threat. It is accomplished by translating organizational concepts, based on doctrine and technologies and manpower constraints, into a balanced mix of combat, combat support, and combat service support units authorized people and equipment. It involves—

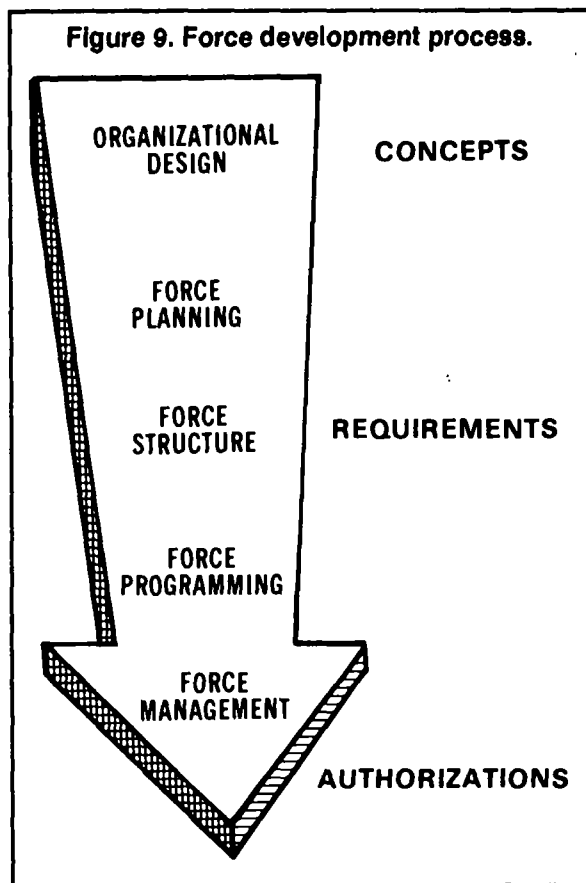
- Combat developers from TRADOC who build organizational models from concepts.
- Force developers from the Office of the Deputy Chief of Staff for Operations and Plans (ODCSOPS), HQDA, and their subordinate MACOM counterparts who use those models to create a mix of units that can fulfill assigned missions and can be supported with available soldiers and equipment.

- Force managers and manpower managers from HQDA, MACOMs, and installations who allocate resources and manage those units.
- Training developers from TRADOC who design training programs to implement organizational models and concepts and doctrine from which the models were derived.
- Materiel developers from Army Materiel Command who turn requirements established by TRADOC combat developers into functional weapon and support systems.

The force development process can be broken down into the five phases shown in Figure 9.

Organizational Design

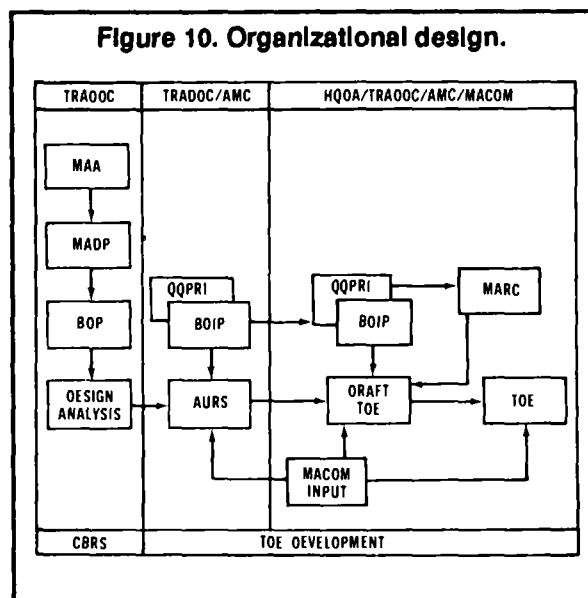
This phase deals with development, design, and documentation of the organizational blueprints and



guidelines that the Army uses to build its force structure (Figure 10). The principal outputs of this phase are the tables of organization and equipment (TOE) and tables of distribution and allowances (TDA). The primary development and design of a TOE is done by a functionally oriented combat developer at a school or center within TRADOC. A TDA is developed at the lowest level possible (MACOM, corps, installation, division). The TDA manpower requirements are generated by the workload to be accomplished.

The need to design new type organizations or change existing ones is generated within the framework of the CBRs. The CBRs identifies deficiencies in the force and recommends solutions. Those solutions may involve organizational design requirements. The organizational design process begins with a front-end analysis consisting of a review of the umbrella concept, missions, lessons learned, field input, and other studies. A key factor in TOE design is affordability. Combat-effective units must be designed within constrained manpower boundaries. The design is documented on the automated unit reference sheet (AURS)—a computer data base which provides a starting point for TOE design.

For equipment-related solutions, the materiel developer's input is contained in two documents: *The first* is the Qualitative and Quantitative Personnel Requirements Information (QQPRI) report,



Chapter 3

which is prepared within the materiel developments community and provides a description of soldier skills required to operate and support a new materiel system. The *second* is the Basis of Issue Plan (BOIP), which is joined with the QOPRI to subsequently influence an organizational design. The BOIP, prepared by TRADOC combat developers, identifies how many items of a new materiel system are to be included in current, new, or revised organizational designs. It also identifies quantities of associated support equipment required to support the density of a new system. Thus, given the manpower required to operate and support one system (QOPRI) and the numbers of that system to be included in a type organization, simple mathematics will provide the total manpower impact of a new materiel system on that type organization. Numerous QOPRIs and BOIPs may be used in the development of an AURS.

Further refinement of the AURS results in a draft TOE. The draft TOE contains the justification for development, concept for unit organization, and unit mission capabilities. It has been updated to include more substantial QOPRI and BOIP information resulting from the full-scale development of new materiel systems. Manpower requirements for necessary combat support and combat service support functions have been added using manpower requirements criteria (MARC).

Manpower requirements criteria provide the rationale for service and support positions above and beyond those tied to new materiel systems. These criteria include both fixed allowances for general administrative positions, such as operations NCOs, and variable allowances based on workload factors, such as tracked-vehicle mechanics.

When the draft TOE has been completed, it is forwarded to the field for review and comment. Upon input from the field and resolution of comments, it is published as a TOE. The TOE is forwarded to HQDA for final review and approval. It is important to note at this time that the TOE is a requirements document, and that the requirements represented have not been resourced. It merely reflects a blueprint for organizing units which are capable of executing current doctrine.

Table of distribution and allowances organizations apply to units designed to provide support for which a TOE does not exist. They are usually non-deployable units organized to fulfill the workload

obligations of a fixed support establishment. They can include civilian manpower positions; TOEs cannot. They are designed on an individual basis by field commands, normally at installation level, and reflect the lowest essential staffing that will allow the most effective use of resources and the most efficient operational capability. The actual design and manpower and equipment requirements are determined using manpower staffing standards and manpower surveys to accomplish recognized missions. The installation then forwards the TDA to its MACOM for approval.

The Army must now decide how many and what mix of these organizations, based on TOEs and TDAs, it needs to satisfy its national security responsibilities within dollar and manpower constraints. Another consideration is the degree of risk to be assumed given a shortage of units.

Force Planning

Army force planning focuses on the policy, guidance, and force requirements established by the National Command Authority and the Department of Defense (DOD). It centers on the threat and national objectives and goals. It also provides a means to progress from the very broad conceptual view of national defense to the specifics of units and force structure. Risk assessments and resource constraints are considered while determining these specifics.

Army planning culminates in the development of The Army Plan (TAP). The Plan is constrained to expected dollar and manpower levels provided by DOD guidance. It depicts the required force structure in terms of numbers and types of divisions (that is, light, heavy, airborne, air assault), specific separate brigades (for instance, 172nd Inf, 194th Armd, Berlin), and other special forces. Before these force levels can be implemented, further definition is required, support requirements necessary to maintain and sustain the force must be identified, and force requirements must be allocated among Army Components (Active Army, Army National Guard, Army Reserve). This is accomplished during the force structuring process.

Force Structuring

Force structuring takes the major combat forces contained in the Army Plan and, according to a

given scenario, develops the combat support, combat service support, and general support forces necessary to sustain them. This is accomplished using a computer-assisted process called Total Army Analysis (TAA). The TAA wargames the combat force to determine the actual mix of support units required. It starts with a simulation of the deployment of major combat forces and proceeds into a warfighting model. It produces a force that is doctrinally sound, is sustainable with required support, and includes all Army components.

The TAA-developed base force becomes the basis for a Force Integration Analysis (FIA) and a Programmed Force Capability Analysis (PFCA). The goal of FIA is to ensure that the programmed force structure is affordable and can be executed. Force developers, with asset managers (that is, personnel, training, facilities, equipment, et cetera), ensure that the assets will be available in time to field the force structure. The FIA identifies where asset management programs must be adjusted to field the force structure; and, in cases where asset programs cannot be changed, it identifies where the force structure must be changed. The PFCA analyzes the capability of the force structure throughout the program years and identifies force structure changes necessary to maintain a balanced force structure capable of accomplishing the Army's mission.

That force structure will become the goal for subsequent programming and resourcing actions. Throughout the process, MACOM and ARSTAF force developers meet routinely to evaluate the force as it takes shape. The final output forms the basis for development of the Army's five-year program.

Force Programming

This phase of the force development process translates the force requirements from TAA into a detailed program ready to budget and execute—the Program Objective Memorandum (POM). The POM lays out a five-year program that describes all aspects of the Army plan to increase readiness and implement new initiatives. It highlights the actions required to meet overall Army strategy and objectives in separate and distinct packages; for example, activating a new division, fielding a new weapons system, or developing a new NCO-education course. These packages are called Program Development Increment Packages (PDIP).

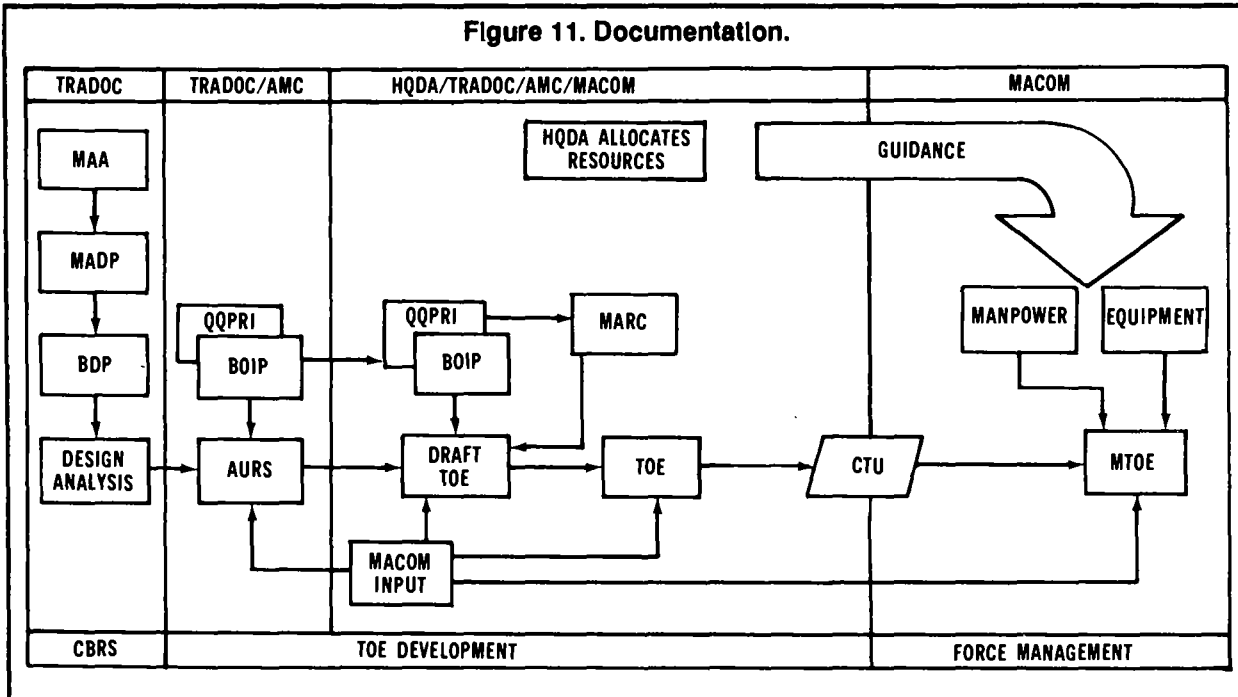
The PDIPs are the building blocks of the POM. They are used to associate force structure changes and other force improvements with resources (manpower and dollars). Each PDIP is designed to be a complete presentation of resource requirements so that decision makers can review, analyze, and prioritize the action it supports. This is necessary in order to build a balanced program and force within real resource constraints.

The approved POM displays a force called the program force. The program force is designed to be achievable within the exact resource levels expected from Congress. It specifies the number and type of Army divisions, separate brigades, armored cavalry regiments, special forces units, and all required combat support and combat service support units. It specifies the force mix among active and reserve components and depicts force improvements over time. It further identifies all the overhead to operate the Army in the training and sustaining base. Then DOD reviews and approves the Army's POM. The specifics of the approved program force are recorded by DA ODCSOPS in its manpower accounting system, the Force Accounting System (FAS). The FAS depicts manpower allocations by unit and by category (officer, warrant officer, enlisted). The system contains no grade or skill information. The dollars and manpower within each PDIP are provided to the MACOMs as Program Budget Guidance (PBG).

Once the force structure has been approved and resourced, those resources are allocated to claimant MACOMs where unit organizations are then documented. The focus of this process is the authorization document. This document displays a unit's approved structure, which includes allocated soldier and equipment resources. It serves as the authority for a unit to exist and is the basis for the requisition and assignment of people and equipment.

There are two types of authorization documents: modification tables of organization and equipment (MTOE) and TDAs (Figure 11). An MTOE is a modified version of a TOE that prescribes unit organization, personnel, and equipment in order to perform an assigned mission in a specific location or environment. It designates the specific unit it applies to, the authorized level of organization (ALO) (how much manpower and equipment), and the effective date (E-date). The

Figure 11. Documentation.



TDA, which was discussed earlier in this chapter as a requirements document, also includes authorization information.

Semiannually the MACOMs submit updated MTOEs and TDAs to HQDA during a management of change (MOC) window. The authorizations in these documents must be within the manpower, dollar, and equipment guidance provided by HQDA. To assist MACOMs in updating MTOEs, HQDA publishes, also semiannually, a consolidated TOE update (CTU) which has the latest version of all TOEs.

The development of authorization documents is supported by The Army Authorization Documents Systems (TAADS). The TAADS is a HQDA automated system that contains all approved authorization documents. Twice a year these authorizations are used to develop planning goals for personnel and equipment planners. The

Structure and Composition System (SACS) supports this effort. The SACS uses input from TAADS, a master TOE file, BOIP file, and the FAS to develop armywide personnel authorizations and equipment requirements for a time period covering the current, budget, and POM years. Authorization documents from TAADS provide the most up-to-date and reliable information; however, they are usually only valid through the budget years. Beyond that point, TOEs are used where MTOEs do not exist. The FAS is used as a management tool throughout to preclude overstatement of manpower authorizations by making the documented unit position match the programmed unit position. Authorization documents are a claim for manpower, dollars, and equipment. Any item of equipment or soldier that a unit is missing can be requisitioned based on a valid authorization document.

SECTION III. ACQUISITION

The establishment of a force structure creates the need for soldiers and equipment. The acquisition of these resources will

provide substance to the force structure. Acquisition in this context is an initial procurement activity.

Materiel Acquisition

Stripped of all but the basics, the Army's materiel acquisition methodology is very simple and straightforward. First, a determination must be made that a new materiel system is needed. This is done by combat developers in the MAA process. That need may arise because of a deficiency that exists in a currently fielded system or from the opportunity to exploit a technological breakthrough. The next step is to explore solutions that will satisfy that need. The best solution is identified according to a mix of factors, the most important of which are effectiveness and affordability. Once an optimum solution has been identified, prototypes are constructed to test the feasibility of the solution. If the solution is workable, it is then further developed, tested, refined, produced, and fielded, with budget support from Congress.

This basic process has been formalized by DOD to provide structure and control throughout the system's life cycle. The formal management structure is called the Life Cycle System Management Model (LCSMM) (Figure 12). The US Army Materiel Command (AMC) is responsible for overseeing the development and acquisition of new materiel systems according to this model, but the

Army's leadership reviews the progress during development and may approve continuation, make corrections, or cancel further development.

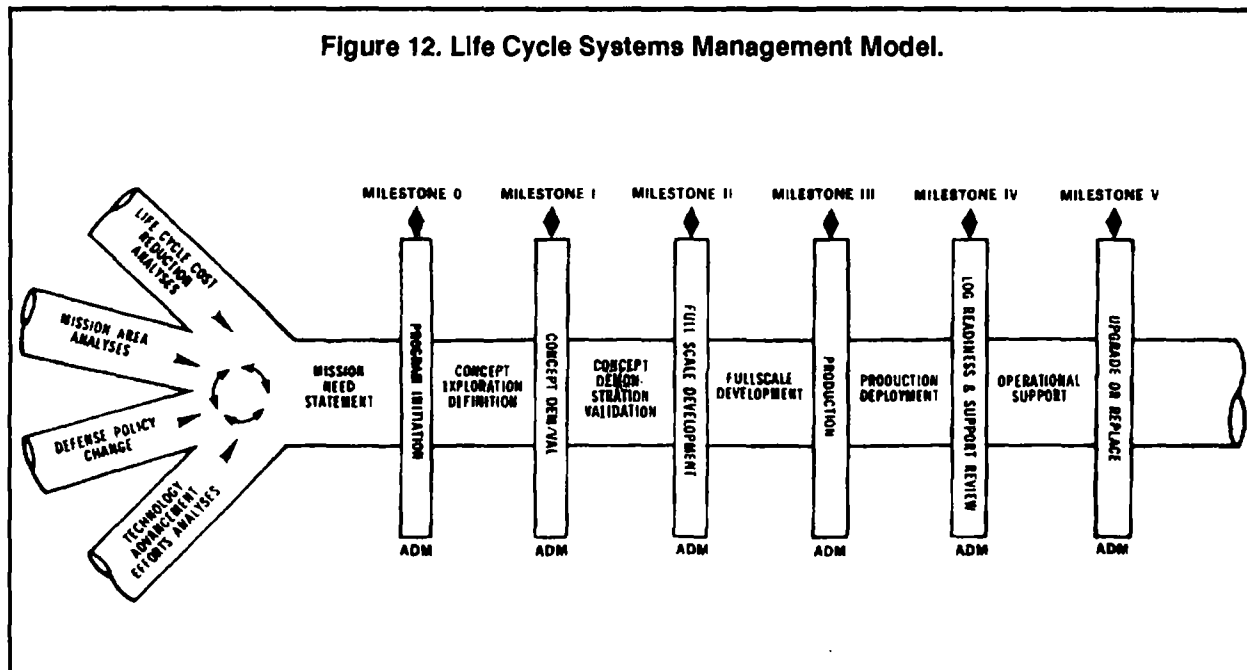
Program initiation. After analyzing and providing the justification for a new system through MAA, requirements documents are prepared that are the basis for formal approval of that system.

Concept exploration. As distinguished from development of hardware, the primary purpose of this phase is to explore potential ideas, concepts, and solutions in a competitive environment. It is conducted jointly by AMC and TRADOC under the auspices of a special study group or task force chartered by HQDA ODCSOPS. The group acquires information for use in selecting the proper alternative for hardware development. Alternative system design concepts are then explored within the context of mission need and program objectives. At Milestone I, the first decision point, the alternatives are presented to a HQDA or DOD decision body. The best concept is selected and approval to enter the next phase is granted.

NOTE: At each decision point a program may also be adjusted or even cancelled.

Demonstration and validation. The primary purpose of this phase is to identify and substantially reduce program risk before making the crucial

Figure 12. Life Cycle Systems Management Model.



decisions on which contractor's system best meets program objectives. During this phase, risk is reduced by testing the concept through simulation, models, or prototypes. This often involves competing contractors. The information that results from testing is used to document associated support requirements. The QQPRI and BOIP are developed at this time. Also at this point, the decision is made to continue, adjust, or cancel. The go-ahead decision usually involves selecting the best design among competing contractors.

Full-scale development. During this phase, the system, with all items necessary for its support including training devices and computer resources, is fully developed, engineered, fabricated, and tested. At the end of this phase a decision is made on its acceptability for entering the Army inventory. Documentation during this phase is similar to that prepared during the previous phase except that more information and experience is available. The QQPRI and BOIP are updated into final versions. When approved and published, they are distributed to MACOM headquarters. As requirements documents they can be used for planning and information purposes and supplement other force modernization planning documents.

Another important document, the Materiel Fielding Plan (MFP) is initiated at this time. The MFP is the principal document around which coordination and agreement on deployment of a new system are accomplished to assure that the gaining MACOM will have sufficient advance information to budget necessary resources and to plan for the receipt of the system. Draft MFPs are published 26 months prior to the first-unit-equipped (FUE) date and are distributed to the MACOM in sufficient copies for subordinate command review.

Production and deployment. During this final phase of the materiel acquisition process, the impact and requirements are greatest on the gaining commands. Inclusive in this phase are all activities associated with procurement and distribution of equipment, training of operational units, and the marshaling of logistics resources into supportable packages. Activities associated with finalization of materiel fielding documents are intense at all levels, especially at the gaining command level. Gaining command influence on the materiel acquisition process is greatest during this phase.

Operational support. The purpose of this phase is to ensure that units that have received the new system are able to achieve a continued high level of operational readiness. Activities associated with this phase include transition to standard support systems and evaluation of the system for upgrade or replacement.

The traditional LCSMM is structured to provide guidance for managing major new materiel development programs. Alternatives to a full-fledged LCSMM development program are—

- To product-improve existing Army systems.
- To use nondevelopment items (off the shelf).
- To tailor the LCSMM.
- To use the Army Streamlined Acquisition Process (ASAP).

The ASAP is used for low-risk development programs which feature integration of mature technologies or proven components (Figure 13).

It does little good to field a new materiel system without the necessary support to sustain that system in the field. That support includes personnel to operate and maintain the system, facilities for storage or maintenance purposes, training programs to educate operators and mechanics, replacement parts for repair purposes, test equipment and technical data for diagnosing problems, and so forth.

This effort to ensure that necessary support is available when a new system is fielded is called integrated logistic support (ILS) (Figure 14). The ILS planning begins almost concurrently with the initial efforts to develop a new materiel system and tracks its progress through the LCSMM. It is an extremely complex process yet vital to the success of the materiel acquisition process. A system that cannot be maintained, supported, or operated in an efficient way fails to meet the needs of combat-ready units.

The MANPRINT methodology is a recent innovation in materiel acquisition. The premise of MANPRINT is to influence the total materiel system design early and to design equipment to fit the man instead of trying to make the man fit the equipment. The six areas MANPRINT analyzes are manpower, personnel, training, human factors engineering, health hazards, and safety. The goal is to field

Figure 13. Army Streamlined Acquisition Process.

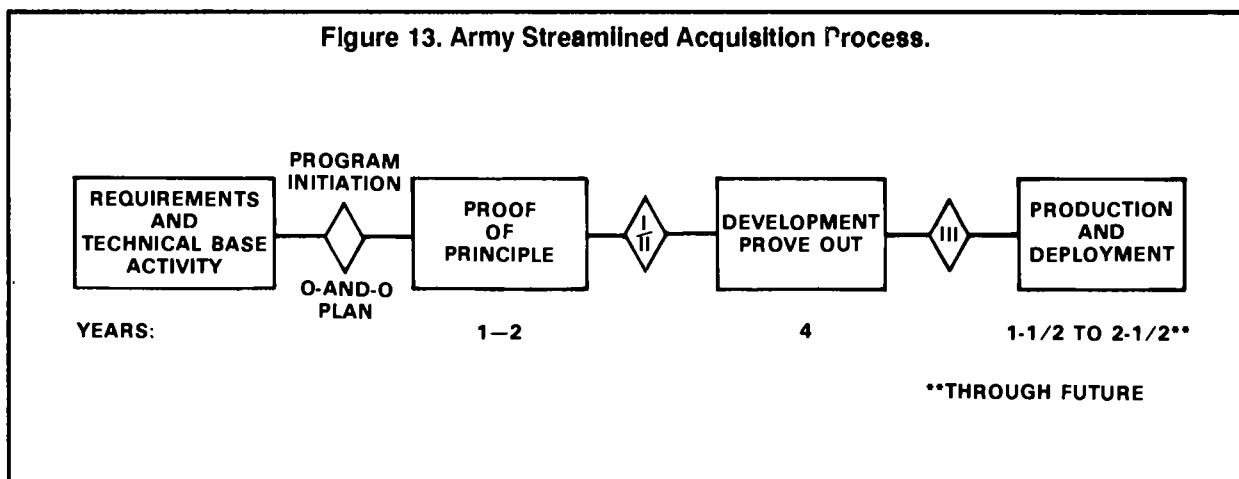
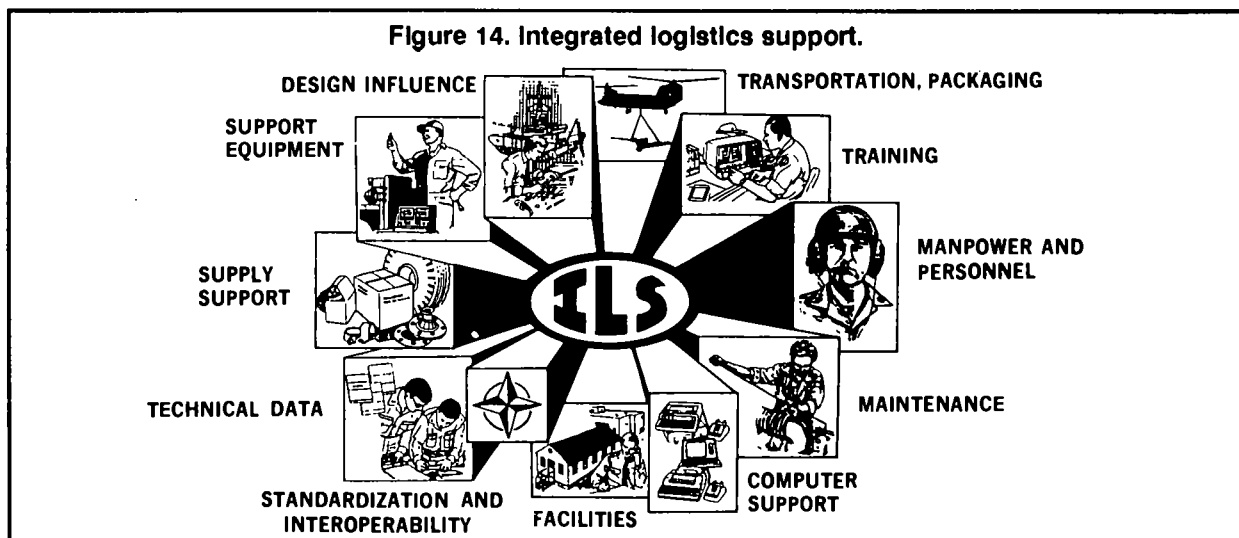


Figure 14. Integrated logistics support.



equipment systems which maximize the capability of a manned system.

Along with developing new equipment comes the requirement to determine how many of that item should be purchased. Acquisition objectives are determined from the logistic portion of SACS called LOGSACS. The LOGSACS provides all of the line items of equipment authorized by every unit or organization for current, budget, and POM years based on MTOE, TDA, and TOE data. Once unit equipment needs are determined, there are additional factors applied, such as war reserve and maintenance spares, to arrive at the acquisition objective. After this objective is calculated, it is

compared against the on-hand inventory. The difference between the objective and the inventory is the quantity of equipment that must be considered for procurement during preparation of the POM and the budget.

Personnel Acquisition

Manning is the process that translates requirements for people into trained units. It involves manpower management, authorizations management, as well as personnel management. It is closely linked to materiel acquisition and force development. For the manning process to work, it

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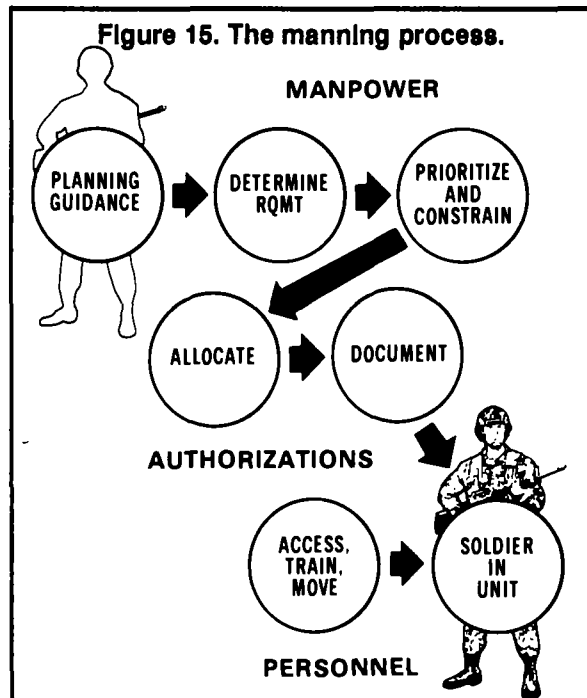
requires an understanding of each of its components, how they fit together, and where disconnects exist.

Because every functional area in the Army has its own peculiar language, an understanding of manning requires an understanding of its language. For this reason, the following terms and their associated definitions are provided

- **Manpower.** Numbers of personnel spaces required or authorized.
- **Requirement.** Valid need for manpower documented in an HQDA-approved MTOE or TDA (indicated in the required column of an authorization document).
- **Authorization.** Allocation of available manpower documented in MTOE or TDA (indicated in the authorized column of an authorization document).
- **Personnel.** Soldiers in the Army.

The manning process begins in the organizational design phase of the force development process; TOEs and TDAs are created in this phase. A major component of these documents is manpower, as expressed by grade and skill. These manpower requirements are influenced by a number of factors including design and utilization information. The Army subsequently decides how many and what mix of these organizations it needs during the planning and structuring phases of force development. Up to this point, manpower has only been dealt with as requirements. But manpower that can actually be obtained must be considered before the Army can go to Congress with its budget request (Figure 15).

Congress sets the limit on how much manpower it will resource through appropriations. This is the End Strength (ES). It is a programmatic number that tells the Active Army how many soldiers it can have on its rolls on the last day of each fiscal year. It also determines how much money is appropriated for military pay and thus limits the size of the Army throughout the year. The ARSTAF, working within this ES constraint, must then determine how many of these resources are to be allocated to each of its MACOMs. A critical consideration here is overhead; that is, the manpower cost of maintaining and sustaining the Army. It represents expected numbers of



personnel not available to man the organizations within the Army at any given time. It includes new soldiers in basic and advanced training as well as soldiers being transferred between units and in advanced individual schooling. This overhead is termed the trainees, transients, holdees, and students (TTHS) account, or the individuals account. The manpower allocated to the MACOMs in order to build and/or sustain their organizations is called the force structure allowance (FSA). The process of determining what manpower can be allocated to the MACOMs is a cooperative effort between two primary ARSTAF elements, ODCSOPS and the Office of the Deputy Chief of Staff for Personnel (ODCSPER). The specifics of that decision are recorded in the FAS and in the PBG.

The FAS depicts manpower allocated by unit and category (officer, warrant officer, enlisted). It contains no grade and skill information. The MACOM provides that information in its authorization documents. Manpower allocations are transmitted to the MACOMs in the PBG. The MACOMs then spread these manpower resources among appropriate organizations and document the grades and skills associated with each in MTOEs and TDAs. It is at this point that actual personnel planning begins.

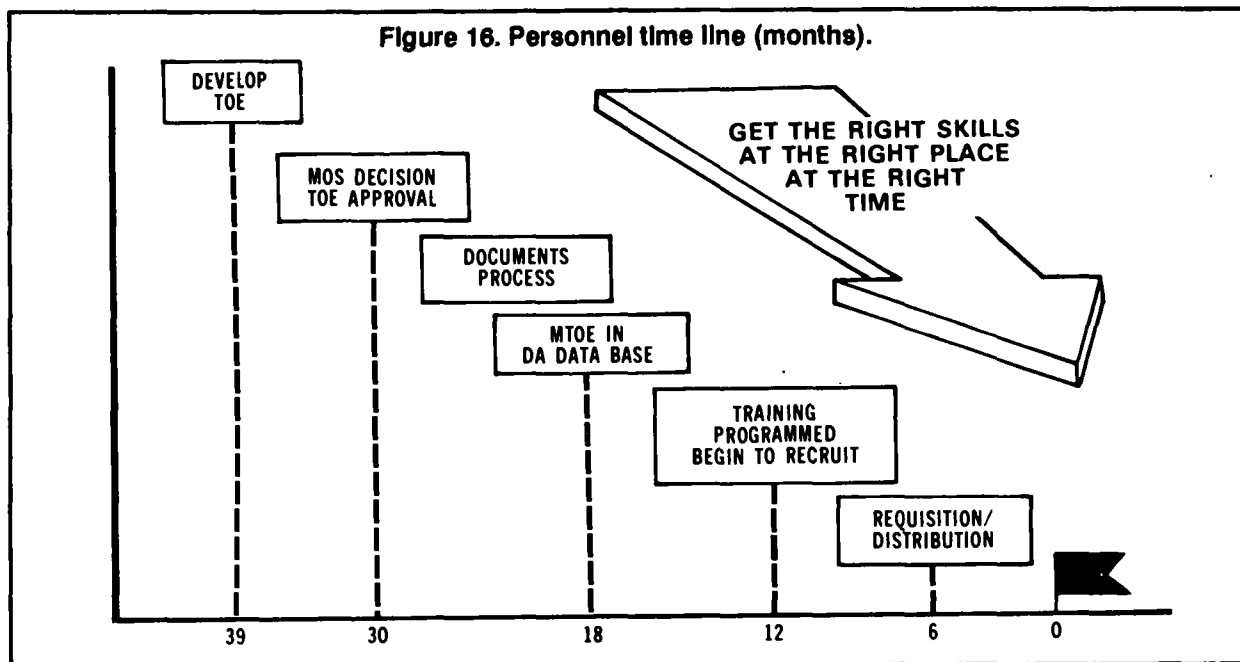
The personnel planning process and the execution of those plans involve many commands and agencies. The primary participants in the process include ODCSPER, the US Army Total Army Personnel Agency (TAPA), the US Army Recruiting Command (USAREC), and TRADOC. The ODCSPER is responsible for overseeing the process and TAPA is its field operating agency for making it happen. The USAREC is the field command charged with the mission of procuring civilians to be soldiers, while TRADOC is responsible for turning those civilians into soldiers. The process itself has evolved through years of trial and error and nowhere are all of its procedures and practices documented under one cover. That is because it is not one homogeneous process but a mixture of associated processes that taken together produce the required end result (Figure 16).

The personnel planning process takes place in four sequential phases:

PHASE 1. Identifying manning goals. Future manning goals are determined from the personnel portion of SACS called PERSACS. The PERSACS contains personnel authorizations by unit or organization, by skill and grade, for the current, budget, and POM years based on data from authorization documents. The TAPA uses

PERSACS data to update the authorizations data base semiannually. That data base, after some additional fine tuning, becomes the manning goal for use in further planning actions.

PHASE 2. Comparing against projected inventory. Knowing what future authorizations will be does not help the personnel planner unless he can also project what the future inventory of personnel will be. That projected inventory, when compared with future authorizations, provides a good indication of what actions must be taken to meet future personnel needs. Where deficiencies exist, policies can be changed or program adjustments can be made. The total Army personnel inventory is maintained by TAPA in data files called the officer or enlisted master files (OMF or EMF). The data contained in those files is input from organizations throughout the Army via the Standard Installation/Division Personnel System (SIDPERS). This inventory is projected into the future based on current personnel policies and historical trends. This "aged" inventory is then compared with the projected manning goals at selected points in the future. The differences that exist at these points represent future personnel shortages or surpluses that must be adjusted to support the planned force structure. This is done by developing and



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implementing a manning program that best aligns inventory with structure.

PHASE 3. *Developing integrated programs.* Developing an effective manning program requires the integrated use of four force alignment tools:

- Accessions (recruiting new personnel).
- Retentions (reenlisting soldiers in the force).
- Designation (reclassification of soldiers from one skill to another).
- Promotion (advancing soldiers to a higher grade).

Each of these tools is most effective when used with the others in an integrated program. That program is drafted initially by TAPA and then refined through a series of ARSTAF-level meetings. Upon final approval, the manning program generates recruiting missions for USAREC,

reenlistment objectives for the MACOMs, training requirements for TRADOC, and reclassification directives for selected organizations.

PHASE 4. *Executing and monitoring the programs.* The recruiting missions transmitted to USAREC by TAPA are synchronized with training available within the TRADOC school system. Once the program is initiated, its progress must be closely monitored. Reality may not meet the expectations of the planners for many reasons—unexpected force structure changes that invalidate the targeted manning goals or deteriorating economic conditions that increase retention above planned levels. For these reasons, ODCSPER and TAPA monitor the manning program and make adjustments as needed.

Once recruited and trained, soldiers are assigned by TAPA to organizations throughout the Army according to needs and priorities.

SECTION IV. RESOURCES

The biennial Army Planning, Programming, Budgeting, and Execution System (PPBES) is the formal process by which strategy and structure needs are linked to resource requirements. The Army PPBES responds to and is dependent on the DOD Planning, Programming, and Budgeting System (PPBS).

The PPBES begins with the planning phase that addresses the development of military strategy and defense policies designed to attain national security objectives. It corresponds with the force planning phase of the force development process. Force objectives and capabilities, as well as resource projections envisioned to counter the estimated threat, are evaluated. The information that results from these evaluations interfaces with the Joint Strategic Planning Document (JSPD) prepared by the Joint Chiefs of Staff (JCS). The JSPD contains the Army's planning force projections, force capabilities, projected levels of acceptable risk, and assessment of the adequacy of projected funding. The JSPD also contains similar assessments made by other services. It is through the JSPD that the JCS contributes military advice to DOD and provides the baseline for defense policy and

guidance for the ensuing programming and budgeting phases.

Based on presidential guidance and information furnished in the JSPD, DOD publishes the Defense Guidance (DG). The publication of the DG signals the close of the planning phase and the transition to the programming phase. The DG provides orientation for the preparation of service program projections envisioned to satisfy defense strategy needs. This causes the Army to examine issues such as:

- How large must the Army be?
- What forces will make up the Army?
- What equipment must be bought?
- Where and when should forces be stationed?
- What facilities must be built?
- What resource constraints can be anticipated?

The Army's answers to these and similar questions are formalized in the Army POM.

The MACOMs are able to identify and justify long-range program resource requirements through the submission of the Program Analysis and Resource Review (PARR). Historically, the PARR is prepared at MACOM level. However, MACOMs occasionally will seek input from their major subordinate commands (MSC). Information from the MACOM's PARR is integrated with the POM. When approved by DOD, the POM is used to update the Five-Year Defense Plan (FYDP). The FYDP constitutes the DOD working summary of approved programs, inclusive of related total obligation authority, manpower, and force levels in terms of major mission programs and support objectives. The approved POM expresses the plans developed during the planning phase into balanced allocations of forces, manpower, materiel, and dollars needed to accomplish the national security objectives for the five-year period.

The Program Decision Memorandum (PDM) is issued to the services on the DOD program decision. Receipt of the PDM begins the budgeting phase for the Army. During the budgeting phase, the ARSTAF translates its need for funds and manpower into a request for dollars from Congress. This request takes the form of the Army Budget Estimate (ABE). When received at DOD, the ABE, together with the other services' budget estimates, is used to update the FYDP to reflect the latest cost projections of the services for approved programs. The budget estimates contain cost information for the prior year and current year of execution, as well as cost projections for the budget and program years.

The DOD uses the services' budget estimates to reach Program Budget Decisions (PBD). The PBD reflects the budget levels at which service programs have been approved for inclusion in the DOD portion of the presidential budget which is forwarded to Congress. The FYDP is also updated for the third time in the PPBS cycle to reflect the finite cost estimates for the major programs addressed in the presidential budget.

Once the presidential budget has been submitted to Congress, the House and Senate Armed

Services Committees (HASC and SASC) evaluate the DOD portion of the presidential budget. Congressional evaluation of the presidential budget impacts heavily on military expenditures through the enactment of authorization and appropriation legislation. The main focus of Congress at this juncture is the development of its versions of the programs to be implemented by the services in carrying out national security objectives. Congress works closely with the Office of Management and Budget (OMB) and the president's budget office to resolve differences between the presidential and congressional versions of the national budget. The product of this congressional effort, referred to as the first concurrent resolution or congressional budget, is an authorization bill. The authorization bill is submitted to the President to be signed into law.

The signing of the authorization bill into law initiates the congressional appropriation phase. During this phase, the House and Senate Appropriations Committees (HAC and SAC) examine the authorization legislation and recommend levels of funding based on the projected national revenues. This congressional action is designed to grant obligational authority for programs. House and Senate concurrence on the composition of the appropriation bill is the second concurrent resolution. If signed into law in late September by the President, the services are given obligation authority to begin executing their approved programs at the start of the new fiscal year (1 October). The absence of an approved appropriation bill requires the enactment of a continuing resolution act by Congress to allow the services to operate at levels equal to the previous year's obligations. At division and installation levels, the authority to begin executing the new year's programs will be reflected through the receipt of a funding authorization document from the supporting MACOM. It is through this process that the field receives funding for day-to-day operations as well as force modernization and integration needs.

Throughout this chapter the focus has been on those actions occurring at HQDA and

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MACOM levels which most influence force integration in the division. This has been done to give the division force integration staff member a general understanding of the system within which he must operate. Force development and acquisi-

tion, along with resourcing, were examined in detail because these functions are the genesis of change in the Army. This treatment of these functions does not lessen the importance of the other functions in the Army life cycle.

CHAPTER 4

Cement—How the Army Trains

The Army must be prepared to fight and win. Training is the means to that end. It is the method by which the combined combat potential of doctrine, organizations, equipment, and the personnel who use them can be realized and sustained. For that reason, training is an essential element of force integration and is critical to the success of today's modernization efforts. It translates the concepts behind new doctrine, organizations, and equipment into a force capable of fighting and winning on the battlefield.

History has demonstrated the decisive role that training can play in battlefield success. It can offset the numerical superiority of an enemy even when the difference in equipment quality is negligible. That fact was witnessed in North Africa during World War II and recently in the Arab-Israeli wars. With a significant quantitative disadvantage and a qualitative standoff, the Army must depend on training to provide the edge with soldiers who are tough, competent and confident; crew and squads that are cohesive teams technically and tactically proficient; and units with the confidence and proficiency to fight as combined arms teams.

SECTION I. ARMY TRAINING

The Army's training goal is to develop and sustain a combat-ready force prepared to mobilize, deploy, and defeat enemies of the United States in support of worldwide national commitments. The training system that supports this goal is based on the following training philosophies:

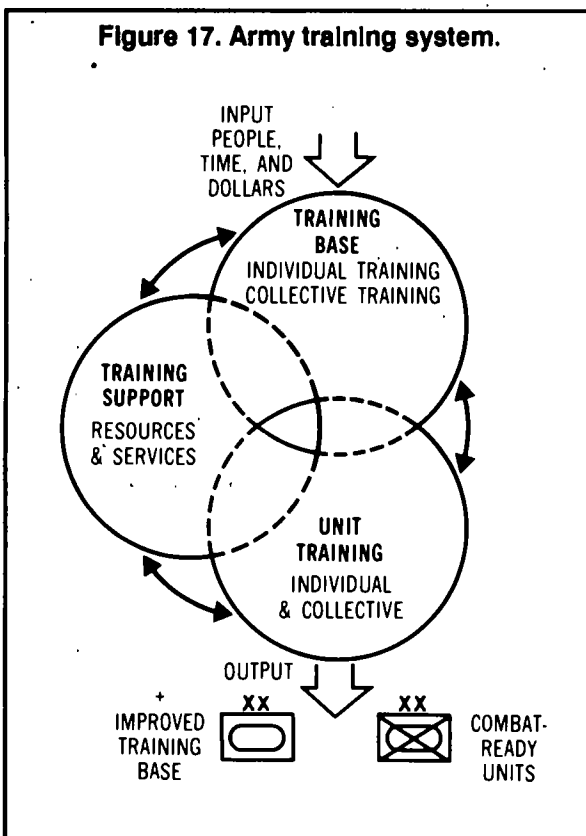
- Train as you will fight. Units must train as they will fight, for they will fight as they have been trained. Training must be hard, realistic, and must stress combined arms teamwork. It must focus on those tasks essential to success on the battlefield.
- Train to standards. Standards provide a common network of tasks, procedures, and drills that allow soldiers and units to function smoothly and efficiently. They also establish a common reference from which to measure the success of decentralized training efforts across the Army.
- Train to integrate new doctrine, organizations, and equipment. The assimilation of force modernization initiatives depends on training. This is especially true of each new generation of high-technology equipment. The challenge of matching man with machine in such a way that allows the machine to be employed with full effectiveness is critical. It makes little sense to pay for development of systems that provide increased battlefield capabilities without making a like commitment to train soldiers to effectively use them. The average American soldier does not possess a degree in computer science or electronics and may be apprehensive about using new high-technology equipment. Some aspects of this problem can be engineered away, but a substantial training challenge still exists.

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- **Train smart to conserve resources.** In today's resource-constrained environment, training must be well planned and executed, getting the maximum benefit out of those resources available. To do this requires the exploitation of technology to develop embedded training capability, training devices, and simulations as cost-effective alternatives to old training methods. Embedded training is an important technology which must be used wherever possible.
- **Train to sustain.** Once standards are achieved through training, they can only be maintained through training.

The Army training system is composed of three mutually supporting parts (Figure 17). The combined operation of these subsystems is responsible for transforming people, materiel, time, and money into combat-ready units. The Army training system is dependent on these resources and must interrelate closely with the management systems that produce them.

Figure 17. Army training system.



Training Base

The training base provides individual or collective training conducted by a service school, training center, or any educational institution sanctioned under DOD. It involves both initial-entry training (IET) and professional-development training.

Initial-entry training is the introductory training given to all personnel on initial entry into the Army. It provides an orderly transition from civilian to military life, motivation to become a productive member of the Army, and an introduction to the basic skills required by all members of the Army. It also provides training in certain job-critical skills dependent on the soldier's assigned specialty. It includes training for new recruits as well as newly commissioned officers.

Professional-development training is advanced training that provides leadership and technical education to support career progression and prepare officers and NCOs to occupy positions of increasing responsibility. The training base provides recruits, NCOs, and officers with a solid foundation of individual skills with which they can eventually become effective members of a unit.

Unit Training

Unit training is individual and collective training conducted in units. It involves learning and sustaining proficiency in individual and collective skills that units need for mission accomplishment. Unit training is discussed in detail later in this chapter as "Division Training."

Training Support

Training support is the foundation on which the Army training system is built. It provides for the central management of training materials and services supporting the training base and unit training. This includes providing manuals, audiovisual aids, simulations, simulators, devices, training areas, ranges, ammunition, and other tools necessary to conduct training in units and institutions.

Training support requirements are developed using a systems approach. This methodology was established to ensure that training support products and tools continue to meet current training needs—a challenge when change is widespread and quick-paced. This approach is common to

nearly every aspect of training development and involves input from materiel acquisition, force development, and doctrine development processes. It consists of five interrelated actions:

1. Evaluation.
2. Analysis.
3. Design.
4. Development.
5. Implementation.

The evaluation process provides constant contact with tactical units to ensure that training and training publications are meeting training needs. The analysis reviews unit missions, collective tasks, and individual tasks. This leads to a definition of conditions and standards for carrying out those tasks and ensures that all combat-critical tasks are identified and developed. The products of the analysis are used to design training and training publications. This leads to training and evaluation outlines for collective tasks that become part of the unit's ARTEP and individual tasks which become part of the Army's Individual Training and Evaluation Program (ITEP). Training strategies and programs outlined in the design phase are developed into draft training publica-

tions, such as the ARTEP and mission training plans (MTP) for collective training and programs of instruction (POI), soldier's manuals, and skill qualification tests (SQT) for individual training. Using this approach, all draft training publications are reviewed to ensure all training needs are addressed by an applicable training publication, that there is horizontal and vertical linkage for each individual task at each skill level, and that all collective tasks are supported by coordinated individual training publications. Implementation is through the Training Requirements Analysis System (TRAS).

The TRAS is a systematic management process used to facilitate the development and implementation of training by documenting plans and support requirements. It integrates the training development and implementation process with external resource systems (for example, personnel, construction, training equipment, ammunition, dollars).

In the final analysis, these training support efforts, and those of the institutional training system, are focused to support unit-level training; that is, where the other elements of the total system—doctrine, organizations, people, and equipment—are brought together and molded into a combat-ready force.

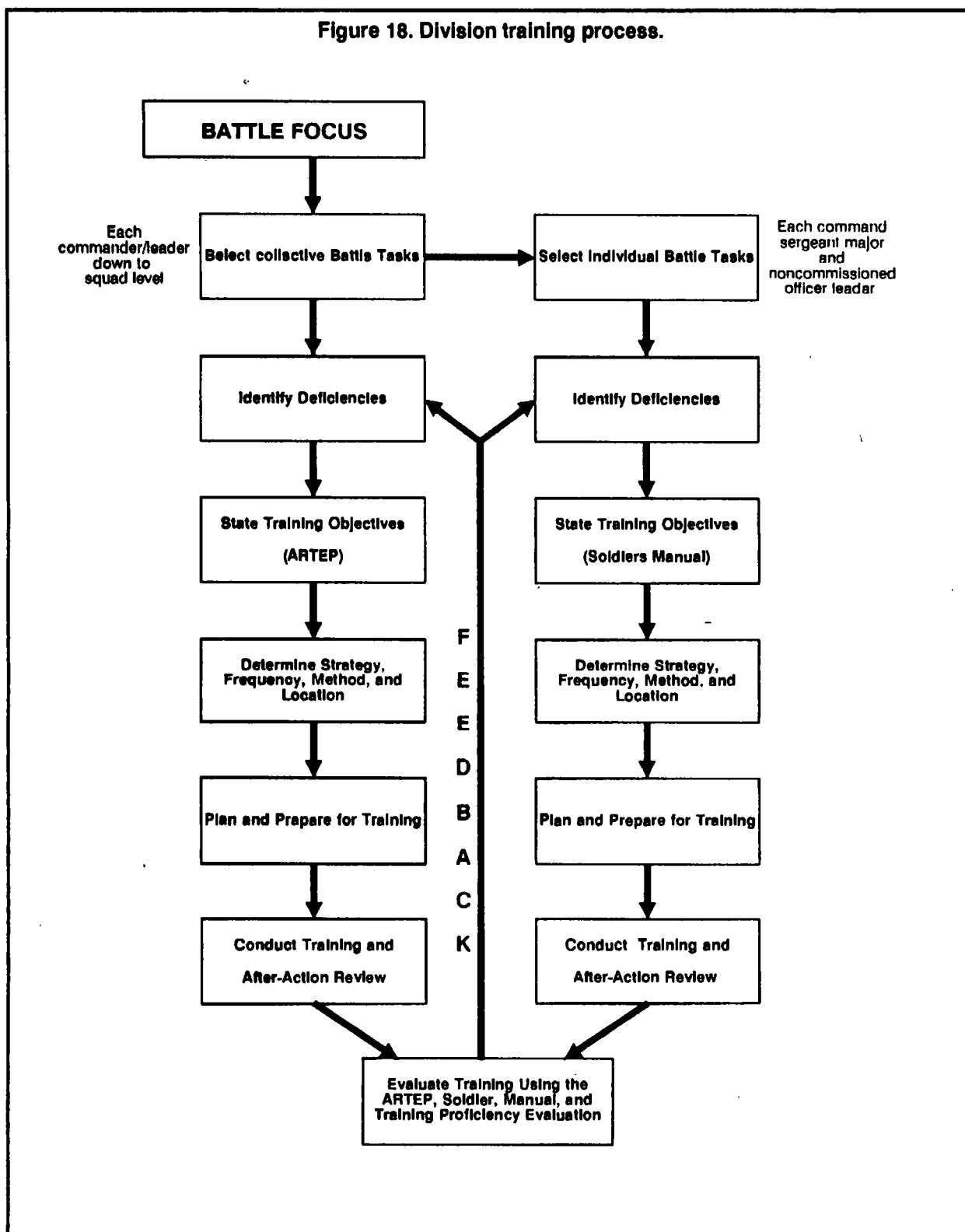
SECTION II. DIVISION TRAINING

Training a division is often performed in an environment characterized by shortages and turbulence. That environment becomes even more challenging due to the demands of assimilating new doctrine, organizations, and equipment. The increase of battlefield complexity is causing training complexity. The expanding need for specialization has added to the range of tasks that must be addressed by a unit training program. Even the tools that trainers must work with—conduct-of-fire trainers, subcaliber devices, instrumented ranges, et cetera—are more complex. For these reasons, it is essential that unit commanders, especially division commanders, cut through these complexities and concentrate training efforts on those tasks that are critical to battlefield success. This is defined in FM 25-100, Training the Force, as battle focus.

Field Manual 25-100 describes in detail the structure for training to effectively execute a mission on the AirLand battlefield. It provides a training management structure which is supportive of the Battalion Training Management System (BTMS) at lower levels. Figure 18 depicts battle focus, as well as training direction, training plans and execution, and force integration as distinguishable components of a successful training system.

Battle focus sets the stage for units to train as they are going to fight. It is founded on the principle that all training must relate to the mission, thereby giving the unit or activity a shared common direction serving as the focal point for the development and execution of training. Implementation of the battle focus philosophy enables the commander and his staff to structure a training program that overcomes the seemingly unending stream of

Figure 18. Division training process.



requirements that beset all units. Battle focus provides an approach for the translation of unit missions into a manageable group of supporting collective and individual training tasks. This recognizes that a unit cannot attain proficiency to standard on every task, but that success is achievable by narrowing the focus to a few well-chosen, vital tasks. In this approach, training becomes the means to attain mission accomplishment. The process by which battle focus is achieved is simple, yet critical. It is established by completely identifying and understanding the unit's mission. Goals are developed from these missions. Next, collective training tasks are identified and arranged according to how critical they are in support of the goals and how they relate to the missions. Individual training tasks are then identified and arranged in priority based on how they support the mission, goals, and collective tasks. These individual and collective tasks become the foundation for developing a training program that prepares units for war.

It is important to remember that force integration and training are not either/or propositions. Force integration requires training to be successful. The integration of new doctrine, organizations, and equipment represents critical training tasks that should be reflected in the unit training program. If they are not incorporated, those initiatives will

achieve only limited acceptance and will simultaneously disrupt other training activities.

The development of a battle focus is only the first step in the analysis process for subordinate units who must further refine those tasks. This process, tempered by the BTMS, evolves into subordinate unit training programs. The full integration of the process is reflected in unit training design and in ARTEP tasks, both trained and evaluated.

After refining the division battle focus into specific individual and collective tasks, subordinate units assess the proficiency of their soldiers to successfully complete those tasks to standards. Where applicable, soldier's manuals and ARTEPs are used to provide the standards. Training resources are requested and allocated against requirements generated by an analysis of the tasks and past records of individuals. Then a strategy is developed for the design—a detailed plan for the evaluation of training. Units and individuals conduct the training, evaluation and feedback are provided, and a new assessment of unit and individual proficiency is made.

Battle focus drives this process. The analysis of critical tasks from division to squad is necessary to make the process work.

SECTION III. TRAINING CONCEPTS

Three basic concepts influence the design of division training: sustainment, multiechelon, and combined arms training.

Sustainment Training

Sustainment training is often misunderstood although it is a reasonably commonsense approach to training. It trains units by integrating individual and collective training and enables the unit to be continuously ready to perform its combat mission. The operative word is "continuously." Sustainment of a skill requires training to a high-quality standard often enough to prevent skill decay or to train new people. At some interval, individual and collective training must be repeated so that proficiency is

sustained. The concept is complicated by the fact that soldiers learn and forget at different rates. Turnover of personnel is a continuous process and requires a unit to conduct repetitive training. Traditionally, training skills in units tend to peak for major events (for example, ARTEP, gunnery). Trainers should attack this peaking and move the proficiency of a unit to a stable level over time.

In order to make this concept work, the ARTEP must become a continuous series of training events and evaluations focused on the sustainment of combat proficiency. Each time a unit conducts a major exercise, the critical battle tasks based on battle focus are sustained at the lowest level, where compatible individual and collective tasks are linked. Sustainment training, in the environment of change,

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is relied on to carry a unit from the period prior to change, through transition, to an increased capability. The difficulty is the sustainment of combat effectiveness throughout the process of change.

Multiechelon Training

Training is conducted on a hierarchy of battle tasks involving individual soldiers, leaders, crews, teams, and units. The synergistic effect of this training enables the unit to perform its combat mission at a relatively high and stable level of effectiveness over time. This requires, as a goal, that critical battle tasks be performed at least three to four times annually under realistic conditions to ARTEP and soldier's manual standards.

To fully address the various levels from individual soldier to division while sustaining proficiency, the division actively plans and executes multiechelon training. This approach helps to train and sustain leaders and soldiers in critical battle tasks under varying conditions. Multiechelon training means training effectively to a division standard at several command levels through the use of training objectives. This requires leaders to formulate training objectives for all levels of command for which training is planned. For example, if a company defense of a battle position is being planned, multiechelon training can occur if specific training objectives are formulated not only for the company but also for the platoons, squads, crews, and individual soldiers. Leaders cannot expect multiechelon training to occur unless this type of detailed planning and preparation is completed. Multiechelon training involves—

- Training at two or more levels concurrently as part of the same event.
- Concurrent leader training away from the training unit.
- Concurrent subunit training away from the training unit.

Training at two levels concurrently is the most common and important form of multiechelon training. For example, a tank crew trains on individual and crew skills concurrently; during tank platoon training, tank crews continue to work on individual

skills and crew gunnery drills. Even during a major field training exercise (FTX), the tank crew should continue its training. In the example cited, leaders cannot expect tank crew or individual training to occur unless specific training objectives are established, training is resourced, preexecution checks are made, and leaders supervise execution.

Combined Arms Training

The full integration of the combined arms team is attained through the brigade slice approach to training management. (NOTE: From the corps perspective this would be a division slice approach.) This approach acknowledges that the brigade commander is responsible for controlling and orchestrating certain basic battlefield functions. In order to attain and sustain a high level of proficiency he must train with those elements that perform these functions. In short, the brigade commander must forge the combined arms team. The key to managing the training of the combined arms team is the brigade slice.

The brigade commander is allocated units and resources necessary to organize the combined arms team and accomplish the following functions:

- Maneuver.
- Fire support.
- Intelligence.
- Mobility and survivability.
- Air defense.
- Combat service support.
- Command and control.

These functions describe what is expected to happen during and in support of the AirLand battle. They do not address the ingredients but rather the results. For example, intelligence fusion (reconnaissance, surveillance, and target acquisition) represents the efficient and effective gathering and use of intelligence from numerous sources (scout platoons, ground surveillance radar teams, et cetera).

These seven functions form the basis of the brigade slice. The actual slice is those leaders and units who must work with the brigade to plan

and coordinate the synchronization of those functions on the battlefield. Key leaders of the brigade slice are—

- The brigade commander.
- The brigade command sergeant major (CSM).
- The brigade staff.
- The fire support officer.
- The air liaison officer.
- The task force commanders.
- The attack helicopter battalion commander.
- The artillery battalion commander.
- The air defense artillery (ADA) battery commander.

- The engineer company commander.
- The ground surveillance radar (GSR) platoon leader.
- The military police (MP) platoon leader.
- The supporting signal company commander.
- The chemical platoon leader.
- The forward support battalion commander.

These players can be modified as appropriate to mission and organization.

The brigade slice extends beyond the brigade to include the cavalry squadron, which has a slice. Even DIVARTY and DISCOM have a distinct slice. The brigade slice, which may be considered to include these other slice arrangements, works together in planning and conducting training. It is expected that the brigade commander will closely monitor the training of all slice elements.

SECTION IV. CENTRALIZED PLANNING AND DECENTRALIZED EXECUTION

Since 1971, the Army has had a decentralized training policy. That policy has often been misunderstood and has led to permissiveness. Decentralized training does not mean that higher headquarters are not involved in training. Their actions are critical in providing and maintaining direction in the training program. A goal of any division training program is to develop teamwork among its diverse elements. That cannot be accomplished if each unit trains according to its own set of priorities and standards, regardless of the needs of the whole organization. The division staff allocates training resources and evaluates the training effectiveness of subordinate units. Evaluation is extremely important, for it indicates not only how well training is being conducted but if the battle focus is being maintained.

With the advent of massive changes in doctrine, organizations, and equipment, the training mission has become one of modernizing, accepting change, and preparing to fight and win—to win with improved effectiveness. Centralized, detailed planning

at division level becomes critical in this process of facilitating change and minimizing degradation to combat effectiveness. The following are the essential elements in the centralized planning process:

- Fiscal year (FY) training guidance.
- Quarterly training guidance.
- Quarterly training brief.

Fiscal Year Training Guidance

The ultimate purpose of FY training guidance is to provide the commander's battle focus to subordinate units. It generally contains the following elements, all of which relate to the battle focus:

Mission analysis, goals, and objectives. These are discussed in Section II.

Resourcing. Divisions are the initial command level where positive control exists to limit the turmoil caused by change. Divisions manage time as the most critical resource in a training plan. Time must be allocated based on the best information

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available. Division is also the level where other resources (funds, ammunition, facilities, land, et cetera) can be controlled and allocated to subordinate units to ensure effective training. The issuance of battle focus establishes the priority for resources.

Training design and evaluation. Both training and evaluation design flow from the established strategy. Divisional training programs with established planning goals and objectives are developed. Goals and objectives are developed that include future doctrinal, organizational, and equipment changes. For example, the multiple launch-rocket system (MLRS) is integrated into a division by including instruction on the MLRS in officer and NCO professional development programs and by conducting practical exercises on the employment of MLRS during field exercises well before it is actually fielded. Evaluations are designed to aid in the integration of new doctrine, organizations, and equipment by determining how they can best be used. For example, an evaluation after-action review should include a discussion of future changes in terms of how a mission can be better or more easily accomplished and should focus on the actual integration of change in a unit's performance. A

division strategy of training and evaluation design is prescribed in the FY training guidance. The training guidance should include both a philosophical base by establishing goals and objectives and a detailed scheduling of specific training and evaluation. It should also contain detailed information on force integration issues in order to alert the subordinate units of important changes and to stress the importance of this effort in training.

Quarterly Training Guidance

The quarterly training guidance controls changes and ensures that combined arms training can and does take place. It updates the battle focus, goals, and objectives for major training exercises and highlights changes in training schedules and force integration issues. It begins the "lock in" process for division training.

Quarterly Training Briefs

Quarterly training briefs limit detractors of training, highlight changes in doctrine and equipment, and protect and ensure that combined arms training is being conducted. It is the final "lock in" for training in the division.

SECTION V. TRAINING AND FORCE INTEGRATION

Full integration of change requires the intellectual preparation of the battlefield by—

- Educating commanders and staff, from division through company levels, in doctrinal changes.
- Identifying support requirements and incorporating them into plans and procedures.
- Reviewing tactical missions and issuing guidance.
- Revising training to incorporate these changes.

Unless such an analysis occurs, it will make little difference how proficient a unit may become. Unless commanders and staff conduct leader and soldier training to take advantage of the increased

combat capability brought about by new doctrine, organizations, and equipment, only marginal improvements to warfighting capability will occur. Training should be planned and conducted at least a year in advance of the introduction of new doctrine, organizations, and equipment in order to accept and implement new capabilities.

Doctrine

To the training developer, changes in doctrine mean the changing of a mindset. As doctrine is accepted, it influences leaders and how they evaluate situations and make decisions. To change doctrine means to change the influences on the decision-making processes. The challenge of doctrine is to take what is published and turn it into applied doctrine.

A bond of confidence between leaders and subordinates is necessary. It requires frequent interaction in seminars, professional development programs, command post exercises (CPX), FTXs, and ARTEPs. Subordinates must gain confidence that their doctrinal thinking represents the thinking of their superiors. This fact is extremely critical given AirLand Battle doctrine that requires initiative and agility of subordinate leaders. The doctrine or concepts of employment should be available to units before reorganization occurs or new equipment arrives. If this has not happened, it may become necessary for units to develop and refine concepts and create bottom-up doctrine.

Organization and Equipment

Organization and equipment capabilities must be studied in order to formulate a doctrinal base. The introduction of new organizations and equipment may initially prove detrimental to a unit's combat effectiveness. Significant changes to command and control must be anticipated before accepting change in order to maximize the capabilities that new organizational structures and equipment offer.

Training must be designed to prepare for the introduction of new organizations and equipment. Trainers must—

- Structure CPXs and FTXs to facilitate the experience of commanding, controlling, and employing new organizations and equipment.
- Use provisional organizations for training purposes to exercise future roles and missions.
- Tailor ARTEPs to facilitate employment concepts that allow units to experience the demands of new organizations and equipment.

Army Modernization Training

Army Modernization Training (AMT) is a DA-managed program designed to aid in the transfer

of information about new doctrine, organizations, and equipment from the developer to the user. It is provided for under the provisions of AR 350-35. Used properly, AMT can greatly enhance a division training program. It consists of the following categories.

New equipment training (NET), which is the initial transfer of knowledge on the operation and maintenance of new equipment from the materiel developer.

Displaced equipment training (DET), which is the requirement for training generated as a result of the transfer of equipment replaced by Army modernization. Although displaced equipment is not new equipment, it is viewed as new equipment by the receiving unit.

Doctrine and tactics training (DTT), which is the guidance to commanders, staff, leaders, and operators on how to employ the combat capabilities of systems and organizations. It is usually included in NET and DET. It does not necessarily mean a training team, but may be reference material provided to the unit.

There are several training strategies available for the implementation of NET or DET. Army Regulation 350-35 gives a detailed description of each of the following strategies.

Organizational training, which brings individuals together following advanced individual training (AIT) for unit training at one location. It requires HQDA approval.

Total unit training, which trains all assigned operators and maintainers of the gaining unit. It also requires HQDA approval.

Cadre training, which is used to train selected cadre from the user MACOM who may then train other personnel or units.

Key personnel training, which is designed for those systems that are operated or maintained by a select number of personnel. Only those personnel receive training.

Training base, which is the ideal training concept. It occurs when the schools are producing sufficient graduates to support the fielding of new equipment.

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Exportable training materials, which are used for relatively simple systems that are being fielded.

The final category under AMT is sustainment training (ST). It occurs following termination of NET or DET and is normally the responsibility of the unit commander. A key aspect of sustainment

training is to ensure that knowledge gained as a result of NET or DET is retained, reinforced, and increased. During sustainment training the unit commander will have the opportunity to train his unit to fully implement the enhanced capabilities associated with the new system.

CHAPTER 5

Force Integration—The Process

Force integration is a comprehensive, logical approach to view, plan for, implement, and sustain change. It is a constantly changing, multidimensional challenge. It must deal with doctrine, organizations, equipment, and people in an interrelated manner. The process of force integration begins with the introduction of a change and continues until "ownership" has been established. Ownership occurs when a change has been fully accepted by both soldiers and leaders of an organization; the new becomes the routine.

SECTION I. CONCEPTS

The Total System Approach

The need to establish and maintain a credible force creates a serious dilemma for the Army. The US does not have the resources to match the threat soldier-for-soldier and tank-for-tank. While some quantitative improvements are possible, most are not. The limits on manpower and dollars are real. The preferred course of action has become a qualitative approach. To build and maintain a quality force requires that all the elements that influence its combat effectiveness be addressed. This is the "total system" approach.

As modernization proceeds, sustaining current capabilities while incorporating newer, more potent capabilities is a difficult balancing act. Without careful thought, the balance can quickly collapse. For example, the reorganization of the division cavalry squadron to a fully modernized configuration is more than just a limited reshuffle of people and equipment. It is an action which impacts on the entire organization. Without tanks, the new L-series cavalry squadron cannot perform guard and covering force missions for the division. Unless other units are trained to assume this mission, or the cavalry squadron

trains with cross-attached tanks, a significant capability will disappear with reorganization. A division must consider this, and other cause-effect, systemic relationships, as it plans its transition. Using a systems approach, planners are able to view the division as a dynamic structure of inter-related parts and plan for all aspects of change—stated or unstated.

The Human Dimension

The human dimension is, without a doubt, the most demanding aspect of implementing a change. Change is not a desired state for most people. Soldiers who are especially fond of routine and regimen detest the uncertainties involved in change. This is because the old way of doing things is well known, and the new way of doing things has not been established. Soldiers are confident and clear about the old ways but are apprehensive about the new. A soldier who is considered an "expert" on a piece of equipment may resist the change to a newer version because he can no longer be viewed as the expert. Knowledge is power and without it he is no longer in control. The same soldier may also be apprehensive about

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organizational changes that dismantle smoothly functioning work teams and reestablish new work teams. When such new teams and groups are formed, the potential increases for disagreements and conflicts over the way work is to be done.

The degree to which soldiers and their leaders accept and understand changes will ultimately be tested on the battlefield. On that battlefield, new tactics, organizations, and equipment will be of little value if they are employed improperly. The key to winning is a complete understanding, at every level, of how to fight. The extent to which this understanding can be instilled in soldiers and their leaders will determine the confidence they will have in themselves, each other, their weapons systems, and their units. It is for this reason that the human dimension is such a significant part of force integration doctrine as well as AirLand Battle doctrine. If this understanding is to be achieved, those who plan and implement force modernization programs must be attentive to the human dimension. Acceptance and understanding can only be achieved through learning. And learning comes from education and training.

Training

Training is a critical element of the force integration process. When introducing new equipment and organizational structure, training is essential to the successful assimilation of the new capabilities that these changes offer.

The broad scope of training necessary to make changes both useful and permanent was not well understood as the Army began to modernize. Force modernization training was essentially new-

equipment training. The primary purpose of new-equipment training was to transfer knowledge from the materiel developer to the receiving unit. It addressed how to operate and maintain the equipment and, to a much lesser degree, how to employ it. There the official training effort stopped. It appears no consideration was given to other necessary but less obvious training requirements.

It is now known that consideration must be given to training brigade and division staff members who are responsible for planning the employment of modernized units as part of a combined arms team. Consideration must also be given to training the other members of the combined arms team who have to integrate their organizational and equipment capabilities with those of the modernized units. For example, a division which fields the Blackhawk utility helicopter has significant training responsibilities outside of the aviation battalion. Infantry and artillery commanders who rely on aerial transport and resupply must understand the new capabilities of the Blackhawk and integrate such considerations into their training and warplanning. Force integration actions and a unit's training program should not be viewed as mutually exclusive actions. They are complementary in a process moving toward a common goal. Force integration must be viewed as an inseparable part of combined arms training. Therefore, for every force integration action, there is a requirement for all units to review their mission-essential task list and make adjustments as necessary in training.

Chapter 6 describes the successful integration of new capabilities into a division. It follows the same track as the cycle for developing a training program as FM 25-100 outlines.

SECTION II. THE PROCESS

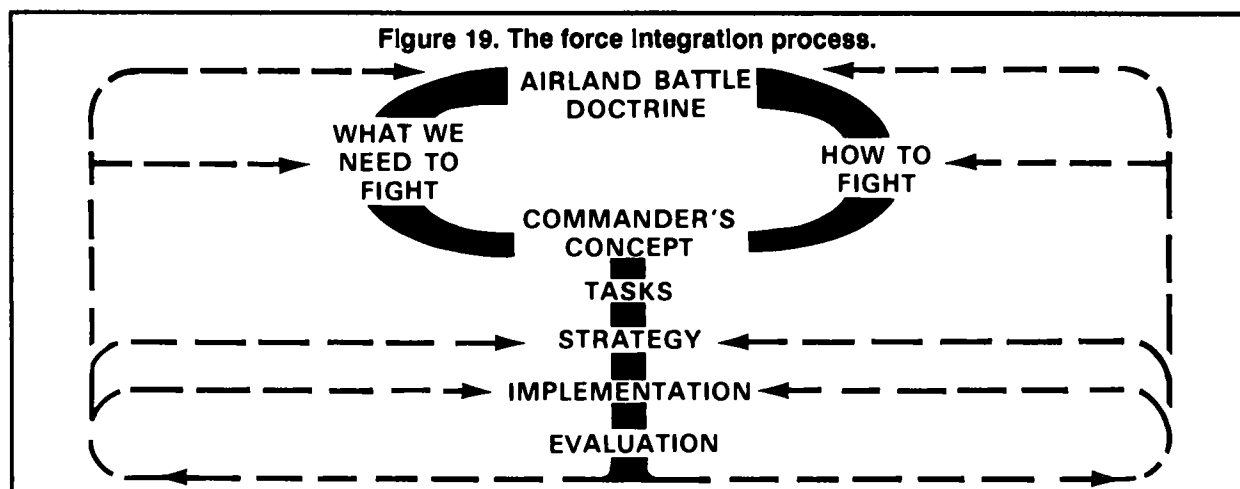
The division must first identify coming changes in doctrine, organizations, and equipment which will in any way influence its battlefield capabilities. This requires the mastery of numerous information sources as well as coordination with higher headquarters. The impacts of new doctrine, organizations, and equipment are expressed in terms of "what we need to fight" (organizational structures, people, and equipment) and "how we intend

to fight" (doctrine, tactics, and techniques) (Figure 19). The division commander determines how and where these changes are to be incorporated. His guidance is, to a great extent, based on his concept of how the division combined arms team will fight on the AirLand battlefield, as influenced by doctrine and the factors of METT-T. The division commander's concept must be incremental and evolutionary.

The concept is then translated into a division battle focus. A battle focus is the commander's vision for his unit, further clarified by purpose, mission, and goals. Prerequisites for winning the AirLand Battle are a clarity of purpose and a widespread understanding of how the division commander uses the doctrinal concepts of FM 100-5. A battle focus provides this clarity of purpose. It translates unit requirements into the essence of its purpose. These requirements include training objectives and individual and collective battle tasks at every level within the division. Also included are technical tasks that must be accomplished in order to make resources available to support the integration effort. These technical tasks might be requisitioning additional resources or even redistributing on-hand assets.

Following this, a strategy is developed that combines the training and technical requirements in a

mutually supportive manner. It considers resource constraints and systemic interrelationships. The strategy serves as a road map for force integration actions and is then integrated into the division's combined arms training and sustainment program. The training program enables leaders to train individuals and units to required levels of proficiency on those critical force integration battle tasks. This is complemented by a transition program that provides guidance for the mechanical actions involved in new-equipment fielding or unit-reorganization actions that support, not disrupt, the training program. Once implemented, these programs are evaluated periodically. The evaluation provides a feedback mechanism to adjust or validate the battle focus, training or transition strategies, or recommend doctrinal, organizational, or equipment improvements.



SECTION III. CRITICAL STAFF FUNCTIONS

Force integration is an ambitious undertaking for any division, especially when added to the daily demands of training and readiness. To make it work requires substantial effort from the division staff. The staff is the nerve center of the division. Only the staff is positioned and resourced to pull together the diverse aspects of force modernization into a synchronized force integration program. Certain functions are critical for a staff to

fulfill its responsibilities in such a difficult and complex environment. These functions are—

- Long-range planning.
- Horizontal coordination.
- Information management.
- Cueing.
- Oversight (monitoring execution and sustainment).

Long-Range Planning

Successful force integration begins with long-range planning. Force modernization is unique. Its nature is such that most of the decisions which obligate funds, dictate training, or forecast spare parts and ammunition requirements five years or more in the future are made early. The long lead times involved tend to diminish or even eliminate staff planning efforts. Given the magnitude of change taking place, all on different timelines, staff planners tend to focus on near-term actions. Long-range planning lapses can often lead to sizable problems. For example, major facility construction requires a five-year lead time. A division staff which waits until the last minute to become involved in planning for the introduction of a new piece of equipment may discover special facility requirements which cannot be met. Something like this can seriously disrupt training and detract from a division's warfighting capability.

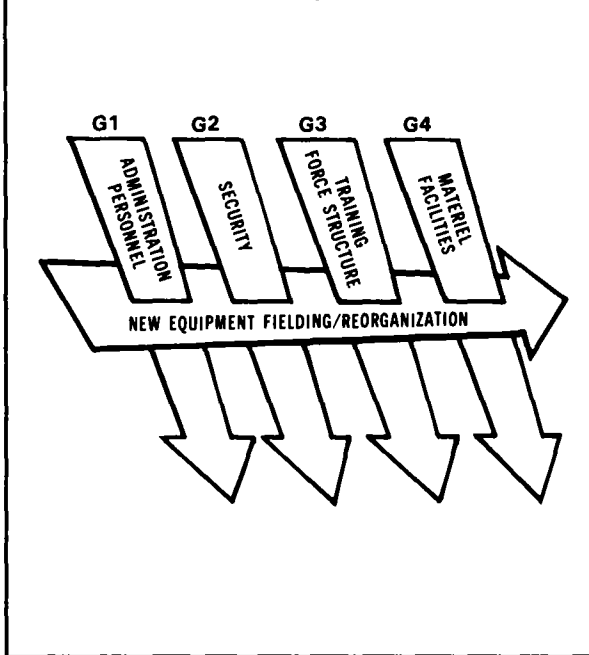
The division staff must ensure that long-range planning is given ample attention on a continuing basis despite the overwhelming demands of current and short-term requirements. Force integration, like combat, demands that the staff fight the present battle, plan tomorrow's actions, and project future operations simultaneously.

Horizontal Coordination

Force integration planning requires a staff to look across the spectrum of change. Only from a horizontal viewpoint can the staff consider and serve the needs of the entire division (Figure 20). This is extremely difficult to do when force modernization actions are fragmented among primary staff sections according to their vertical or functional orientation.

An example of this would be to assign the responsibility for introducing a new piece of equipment to the G4 (Assistant Chief of Staff for Logistics). Fielding a new piece of equipment often involves more than logistics, however. There may be organizational changes required which are the responsibility of the G3 (Assistant Chief of Staff for Operations). The G1 (Assistant Chief of Staff for Personnel) has the responsibility of supplying new personnel to operate and maintain the

Figure 20. Horizontal coordination required by force integration.



new equipment. Unless extensive horizontal coordination occurs, each staff section would probably place the fielding action within its own set of priorities. Planning and execution would be disjointed because of varying degrees of emphasis among the staff sections. Disconnects may occur, resulting in failure.

On a division staff it is always possible, indeed probable, that a staff specialist (vertical or functional expert) will develop a plan which he believes, in all good faith, will benefit the entire division. Before the plan is adopted, however, it becomes necessary for someone, usually the Chief of Staff, to evaluate the plan from a much broader, horizontal viewpoint. The Chief of Staff must ask questions about interface and coordination with other staff elements and organizations within the division to determine the impacts of such a plan across the division. Focused on their own areas of expertise, staff specialists are not normally interested in lateral and related functions.

Planning and executing the integration of new doctrine, organizations, and equipment into a division requires extreme sensitivity to horizontal

coordination. When dealing with multidimensional change, the impact is not simply additive but the product of a complex multiplicative function. Changes in one dimension prompt adjustments in others. These in turn influence other facets in an ever-increasing web of interdependencies. Planning in such an environment can only succeed if all aspects of the problem are considered and accounted for.

Information Management

The ability of a division staff to plan for and execute force integration is based on its ability to manage information. That ability is severely constrained by the fragmented nature of the information involved and the varying organizational structures and communications means used. Much of the key information associated with force modernization is spread among numerous documents, publications, and automated information systems. The information that a staff needs for force integration planning is buried throughout these documents and systems; it does not arrive in a neat package. It enters the division through numerous points at different times. Information that is valuable to one staff section can easily be disregarded

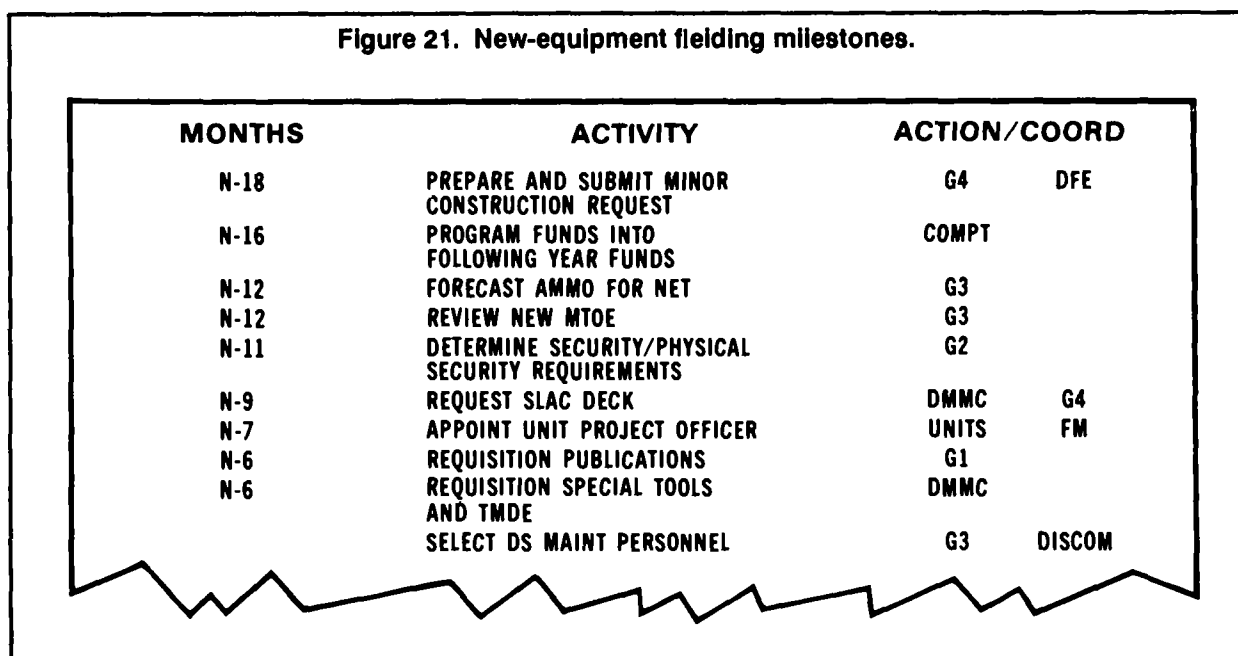
by another. The vertical or functional orientation mentioned previously can cause this.

Information must be managed to overcome these deficiencies. It must be quickly provided to those who need it, both in the chain of command and across functional boundaries. There is no place in the force integration business for surprises. Open and continuous communications, both horizontally and vertically, at all levels is the best insurance against that unwelcome possibility. The information should be organized to provide only that which is necessary to those who need it. Care must be taken to avoid information overload. The overload condition occurs when an individual or staff receives more information than it can effectively process. The ability to process information is affected by the information's intensity, relevance, and meaning. It is important to note that it takes longer to process nonrelevant information than relevant information.

Cueing

Cueing is a necessary staff function, especially in a resource-constrained environment. Cueing is essentially a milestone methodology used to orchestrate and monitor the accomplishment of critical tasks (Figure 21). Many of the technical

Figure 21. New-equipment fielding milestones.



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tasks which must be accomplished in support of force integration are time-dependent. One misstep can create problems for all the steps that follow. To ensure that these tasks are done in time, milestones are established and enforced. Units, and even other staff sections, must know and then be reminded of when actions are to be accomplished. These milestones should be integrated into the division's training and activity calendar so that conflicts may be resolved and the entire process synchronized.

Oversight

The oversight function provides a method for making follow-up checks. The rapidity and

volume of changes associated with modernization can easily cause incremental and selective forgetting or both. One of the most significant aspects of force integration doctrine is that it recognizes that change must be sustained. To simply introduce a new doctrine or item of equipment to a division does not ensure that it will be properly used, or used at all, after the initial introductory period. But, however the change is conceived and implemented, it will fall by the wayside unless it is incorporated into the organization's policies, procedures, and reward systems. A routine oversight program can provide feedback to determine if the intended change was accomplished, and then if it is being sustained.

CHAPTER 6

Force Integration—Managing Change

When any complex organization undergoes change, especially change as extensive and far-reaching as the current modernization efforts, management of the process becomes a critical factor. To the maximum degree possible, an organization must control its transition and not let events control it. This is as true at the HQDA level as it is at the division, brigade, and battalion level. Time is a valuable (and perhaps the most critical) resource within any organization. Just maintaining an acceptable level of readiness is a time-consuming task. The added requirements of integrating new doctrine and changes into an organization and fielding new or improved systems make available time even more precious. A division that only reacts to the additional demands of force integration on an "as-they-occur" basis squanders valuable time. There is no doubt that unanticipated changes may occur at the last minute, but long-range planning and preparation ease associated difficulties and make adjustments simpler and less wasteful of time, money, and manpower.

To plan for and control the force integration process effectively requires an in-place, division-level management structure. A variety of solutions are possible. This structure may be part-time, where staff members devote part of their time to planning and managing the change, or it may be full-time, with selected personnel solely responsible for the force integration process.

This chapter will address these basic approaches to the organizational control of force integration as well as some useful variations. The array of possible management structures offers each organization the opportunity to tailor its response to the challenge based on its own unique situation. Before addressing the specifics of each approach, however, it is necessary to explain why the traditional division staff might be altered or augmented in this manner. It is also important to define what roles the management structures are expected to fulfill within the framework of the force integration process.

SECTION I. THE STAFF CHALLENGE

Faced with a substantial day-to-day workload, traditionally organized division staffs have had difficulty coping with the long-range planning demands required by modernization efforts. The traditional FM 101-5 G1, G2, G3, and G4 distribution of functions and the vertical orientation of the division staff is one factor contributing to this weakness.

Horizontal coordination among division staff members is extremely important in managing the "total system" approach to new equipment and organization fielding. This focus must be maintained from the early stages of long-range planning through execution and sustainment. However, the focus and associated requirement for effective and continuing coordination between staff sections is

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difficult to sustain, especially when it must compete with the here-and-now demands of current missions. Tank gunnery is a G3 priority; the G2 is concerned about the basic load of maps; the G1 wrestles with officer management; and the G4 stresses ration accounts.

The traditional vertical orientation must be put aside when it comes to fielding a new truck or reorganizing the division's aviation assets. Primary and special staffs must simultaneously place appropriate emphasis on their efforts to accomplish these missions and maintain continuous horizontal communications if those efforts are to result in success. However, the long lead times involved with most force integration undertakings tend to diminish these initial cooperative planning efforts that are so critical to the ultimate success of the action.

Given the magnitude of change taking place, all on different time lines, staff planners may tend to focus on those missions that will be accomplished on their "watch" and delegate the others to the "as time permits" file. These long-range planning lapses can often lead to sizable problems. Major facility construction requires a five-year lead time. On-site preparation for new equipment fielding may begin two or three years in advance of the actual event. The review of new TOEs provides a two- or three-year advance preview of a unit's future structure and authorizations. The failure of a division to become involved in the initial planning for these and

other activities may result in serious disconnects between high-level planners and those who must execute the plans. These disconnects may become major training distractors or disruptions that can threaten a division's ability to get the job done.

For the most part, divisions are organized and staffed to deal with the present on a sequential rather than simultaneous basis. However, during periods of great change, they must also deal with two other situations—transition and the future. Many division staffs are, in fact, faced with the complex task of simultaneously planning and implementing plans for three divisions at once—the present division, the division in transition, and the future division. This task often demands more leadership, management, and resources than have been made available for daily operations. Therefore, it is necessary to make use of various organizational techniques or approaches designed to help the division staff overcome these difficulties. These approaches may or may not require the commitment of manpower resources. All will probably require some additional resourcing, even if that equates only to time. Before addressing each of these, it is necessary to define what it is that must be accomplished. We must define those functions that must be performed to ensure efficient and effective force integration—functions for which the division staff, as currently organized, is neither designed nor resourced to carry out.

SECTION II. FORCE INTEGRATION TASKS

As with every coordinated staff action within a division, there are certain critical functions to be performed.

✓ **Recommending Priorities**

Planning for the integration of new doctrine, organizations, and equipment into an existing multi-echelon, combined arms sustainment training program requires looking across the spectrum of change of the entire division. Priorities that have the interest of the entire division in mind can be recommended only from that viewpoint. This is impossible to do when force integration initiatives are

distributed to primary staff sections according to their functional orientation. An example of this would be to assign the primary responsibility for fielding a new piece of equipment to the G4. The structural change associated with this action falls within the G3's area of responsibility, security considerations are the G2's, et cetera. Each staff section places the fielding action within its own set of priorities. Does it receive the proper amount of emphasis from each staff section at the appropriate time? Maybe not. Will something fall through the crack? Maybe so. In order to avoid this, it is necessary to establish priorities across staff boundaries and enforce adherence to each priority.

Managing the Information Flow

Much of the key information associated with force integration initiatives is published in numerous documents and publications. System-specific information is captured in the Army Modernization Information Memorandum (AMIM) and materiel fielding plans. Organizational information can be found in TOEs, MTOEs, the Force Modernization Master Plan (FMMP), and the AMIM. Facility information is found in system and organization facility support plans. Doctrinal information is in FMs.

The broad spectrum of information needed to address the total impact of a force integration action does not arrive in a neat package. Higher level staffs have the same vertical orientation problems that plague division staffs. Because of this, information that is critical in one staff section can get buried in another. Vertical orientation causes these staffs to overlook the impacts across functional boundaries. The flow of information must be managed to overcome these deficiencies. It must be quickly provided to those involved, both down the chain and across functional boundaries. For example, a series of small changes in equipment authorizations in the maneuver battalions of a division, which seem insignificant to each battalion, may add up to a major change for the division support apparatus. The information should be organized so as to provide only that which is necessary to those that need it. Frequently, key information is hidden in an overload of superfluous data. This is intimidating to commanders and staffs pressed for time and can result in the information being overlooked altogether.

Cueing Service

Because many of the resources required in the force integration process are acquired according to very specific time lines, long-term and near-term milestones must be established and enforced. Units must know and be reminded of when each action is to be accomplished. These milestones should be integrated into the division's training and activity calendar so that problems can be avoided and all the elements associated with a change are brought together at the right place and time. Enforcement of the milestone schedule is critical. It is also difficult, especially when a number of staff sections are involved. There is a tendency for staff sections to abdicate their responsibilities to those long-range planners who established the milestone. The long-range planners are not staffed to do the work of others. The milestone schedule performs a "cueing service" by informing all staff sections when they should act in their traditional functional staff area in the force integration process. It minimizes wasted effort by efficiently orchestrating the combined actions of the entire staff.

✓ Monitoring Execution and Sustainment

Feedback is extremely important to the force integration process. It tells where adjustments are required to make things work more efficiently. It is also used to determine if what was accomplished was what was intended. A new doctrinal initiative has not been integrated into a division just because commanders have the appropriate FM on their desk. We must determine if soldiers are actually following the new doctrine on a regular basis.

SECTION III. THE CRITICAL DIFFERENCE—LONG-RANGE PLANNING

Successful force integration requires charting a known course and begins with long-range planning based on an 8- to 10-year timeframe. In charting a division's future course, commanders and staffs must take into account impending doctrinal, organizational, and equipment changes before they occur and then tie each change to both the PPBES cycle and the division's training plan.

(See FM 25-100.) Nothing is more normal to a division than changes that occur without warning and interrupt scheduled training, operations, support, and sustainment activities and influence readiness. Long-range planning with near-term updates can help to avoid or at least minimize these negative effects. Force integration planners must observe ✓ two guidelines:

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Identify what the changes are, who is involved, and when they will occur. This requires the mastery of numerous information documents and systems and close coordination with higher headquarters. In the force integration environment, current information has a short life expectancy. It must be continuously updated. Do not hesitate to be proactive.

Identify and monitor technical and mechanical milestones. There are certain time-dependent technical and mechanical tasks that must be accomplished before actions such as new-equipment fielding may proceed. They are usually associated with releasing resources necessary to support these actions. The responsibility for performing these tasks usually rests with higher headquarters; however, the failure to accomplish any of them creates problems that rest at division level. The completion of these tasks should be monitored by division staffers, thus helping to avoid delays that waste valuable time and energy.

The net result of the planning effort is a Long-Range Force Integration Plan (LRFIP). The plan ties force integration actions to division goals as well

as to how the division intends to fight. It evaluates each action in terms of structure, personnel, equipment, resources, plans, and sustainment. It incorporates planning data from a variety of traditional information documents and provides easy access for commanders who are often absorbed in other matters. The plan provides a general direction for all force integration actions including divisional input into the PPBES. Its methodology permits early identification of resource requirements and constraints. Its view toward the future allows the development of a complementary training program in the execution year that balances current and future requirements.

The LRFIP provides general direction for all force integration actions and major planning guidance for entering into PPBES. It identifies resource requirements and constraints early. However, it has a certain amount of built-in uncertainty caused by the nature of the decision process and current resource constraints. Because of this uncertainty, the LRFIP will be of little interest or value to the tactical commander without a short-term "cueing" system.

SECTION IV. CUEING

The force integration cueing system is a two-step process. Each quarter a force integration summary is published with the division commander's quarterly training guidance to serve as a "primer" to inform, assist, and document all integration actions. The force integration summary is organized by, and contains a crosswalk for, each AirLand battle function for such impacts as doctrine, structure, personnel, equipment, training, resources, plans, and sustainment for every force integration action. The information is displayed under each AirLand battle function that must be considered in the effort to improve our combat capability, as shown in Figure 22.

As fielding of new doctrine, force structure, or equipment nears, starting with the 270- to 300-day requisitioning windows for personnel and equipment and publication of the annual FY training guidance, an LOI or operations plan (OPLAN) is published for each force integration action.

Force integration LOIs are developed according to the following methodology:

- Review of information documents.
- Crosswalk with FY and quarterly training guidance.

Figure 22. Quarterly force integration summary.

Timetable matrix
New doctrinal concepts
New force structure
New or modernized equipment
Personnel
Facilities and stationing
Resourcing
Readiness reporting
Combined arms training
Battle focus integration

- Fielding unit appoints project officer to act as liaison to force integration staff.
- Joint development of milestones and taskings.
- Publication of strawman LOI or OPLAN.
- Staffing to develop annexes or refine taskings or eliminate conflicts.
- Final staffing, which involves division and special staffs, assistant division commanders (ADC) and major subordinate commanders, and installation and military communities.
- Publication.
- Execution and monitoring.
- Ninety- to 180-day follow-up evaluations.

These LOIs have the same authority as the more traditional tactical and training OPLANs published by the G3. They are signed by either the chief of staff or the commanding general. They establish milestones and specific responsibilities for fielding units, staff, and external organizations, including installations or communities and higher headquarters. In short, the force integration milestones for each force integration action become battle tasks to be accomplished within the framework of the division-level combined arms, multiechelon, sustainment-training program. As an example, a force integration LOI to reorganize the division's cavalry squadron to conform to the Army of Excellence (AOE) force structure configuration might well evolve from the matrix developed jointly with other staff elements shown in Figure 23.

Figure 23. Force structure matrix.

MISSION: Reorganize Division Cavalry Squadron	G1	G2	G3	G4	COMP	DISCOM	DEH	AVN
1. Identify final structural objective								
2. Identify resource requirements/constraints People Equipment Facilities Funds								
3. Review doctrine—determine new mission capabilities								
4. Determine reorganization strategy								
5. Activate air troop—inactivate ground troop								
6. Equipment cross level/turn in Tech inspection Parts Funds								
7. Requisition/cross level people								
8. Conduct CPX/FTX								
9. Adjust OPLANS								

SECTION V. FORCE INTEGRATION ROLES

The commander is the chief force integrator in the division. It is his battle focus that provides direction for the process. There is, however, some debate as to who is the staff proponent for force integration on the division staff. Each division's situation is different in terms of force integration and each must select the command and management approach that best suits that situation. As the situation changes, the approach should change incrementally. Staff integration is properly the role of the division chief of staff. This works because it does not change traditional staff relationships. However, it tends to break down as the pace of modernization quickens. The massive information flow and the additional long-range planning requirements serve to overload an already overworked staff. This situation leads to a solution that designates the G3 as the division's force integration proponent.

Force development is an important segment of force integration. Because the G3 has a TDA section devoted to force development, he becomes the next logical answer to the question of who's in charge. More manpower, with expertise in a key area, is now devoted to the task. However, under this arrangement, force integration is still an additional duty. This, along with the operations and training focus of the G3, may skew the "total system" horizontal approach that is required to make force integration work. Detailed support planning, both personnel and materiel, may not receive sufficient emphasis or proper direction and thus jeopardize the entire effort. These problems have been recognized in the past and steps have been taken to minimize or eliminate them. The problem of focus can be overcome by educating the G3 on the full scope of force integration. The problem of insufficient manpower is more difficult. There is no doubt that the modernization and integration effort requires dedicated manpower.

Prior to FY 84, all manpower dedicated totally to modernization came out of existing divisional resources. In FY 84, HQDA acted to ease that burden by authorizing TDA spaces to corps, divisions, separate brigades, and selected subordinate commands to manage modernization. Many divisions created a separate office under the G3 dedicated solely to modernization planning. These sections

are usually equipment-oriented because that has been the most visible part of past modernization. That emphasis, which tends to be shortsighted, is slowly changing to an integrated, organizational approach that recognizes that the impact of modernization is more far-reaching than just new equipment.

Because of the critical nature and tempo of force integration activity, some divisions have placed this staff element directly under the chief of staff. This simplifies lines of communication and provides more direct access to the commander. It also elevates the importance and visibility of force integration by creating an assistant chief of staff coequal with the G1, G2, G3, and G4.

No matter who is in charge of the division staff's force integration effort, there are universal factors that influence its success.

The Commander's Backing

The division commander must support the force integration effort and must ensure that all commanders and staff understand and support the division's force integration goals and priorities. His backing is the informal authority behind efforts to orchestrate the actions of numerous units and staff elements. He must be accessible to the primary staff elements responsible for planning and developing force integration initiatives. He must also communicate to the staff and subordinate commanders the important linkage between the training program and force integration. Force integration plans must carry the same authority and weight as the more traditional tactical and training plans the G3 publishes.

The Team Effort

Force integration is a team effort. It must be planned and executed as a multiechelon combined arms endeavor. Success or failure rests on the weakest link in the chain. Each soldier must understand his role in the process. Leaders must encourage input from every level and across functional boundaries. Lines of communication should enhance the quick, efficient internal staff controls that maintain the tempo of activity rather than

hindering it. Information must be available across staff boundaries. Information is power, and with force integration it must be shared to be effective. Caution should be maintained, however, in ensuring that only essential information is distributed. Data overload can slow the process, especially when the tactical commanders, who must execute the action, must search through voluminous documents for key information. Lines of communication are also factors. These must be simple and direct. If normal staffing routes are long and complicated, steps must be taken to establish alternative routes to maintain simplicity and momentum.

Leadership

Leadership is a key ingredient to successful force integration. Leaders at every level of the

division must create a climate conducive to integrating new ideas and capabilities. This requires extensive involvement in the process. This does not mean that a commander should be involved in the minute details of the day-to-day management of change. It means that the commander is responsible to support the integration actions. To do this requires leaders that are—

- Knowledgeable and committed. Leaders and their staffs understand the process and are committed to support the required changes.
- Willing to devote resources. Support includes a tangible commitment of people, money, equipment, and time.
- Willing to take risks. Leaders must be open to new and innovative approaches.

SECTION VI. ORGANIZATIONAL APPROACHES

Once it has been determined who is in charge of the division force integration effort, a management structure must be established to make it happen. This structure should take into account the size of the challenge and those factors that facilitate integration. It should be adaptable to both the pace and scope of change. Its design should enhance the strengths and minimize the weaknesses of the traditional general staff. The following organizational approaches and management techniques are ways to do this. Each has its own strengths and weaknesses, and none are mutually exclusive.

The Centralized Approach

This approach brings together all those resources necessary to manage the entire scope of force integration under one staff element. It requires functional experts in the areas of doctrine (AirLand battle functions), force structure, personnel, new equipment, resources, and facilities. It may also include positions dedicated to overseeing the fielding of certain major systems; for example, an AH-64 system manager. This approach is effective in centralized planning and decentralized execution of force integration, and, as such, meshes with the training philosophy outlined in FM 25-100. There is very little need for other staff elements to become involved in initial long-range planning

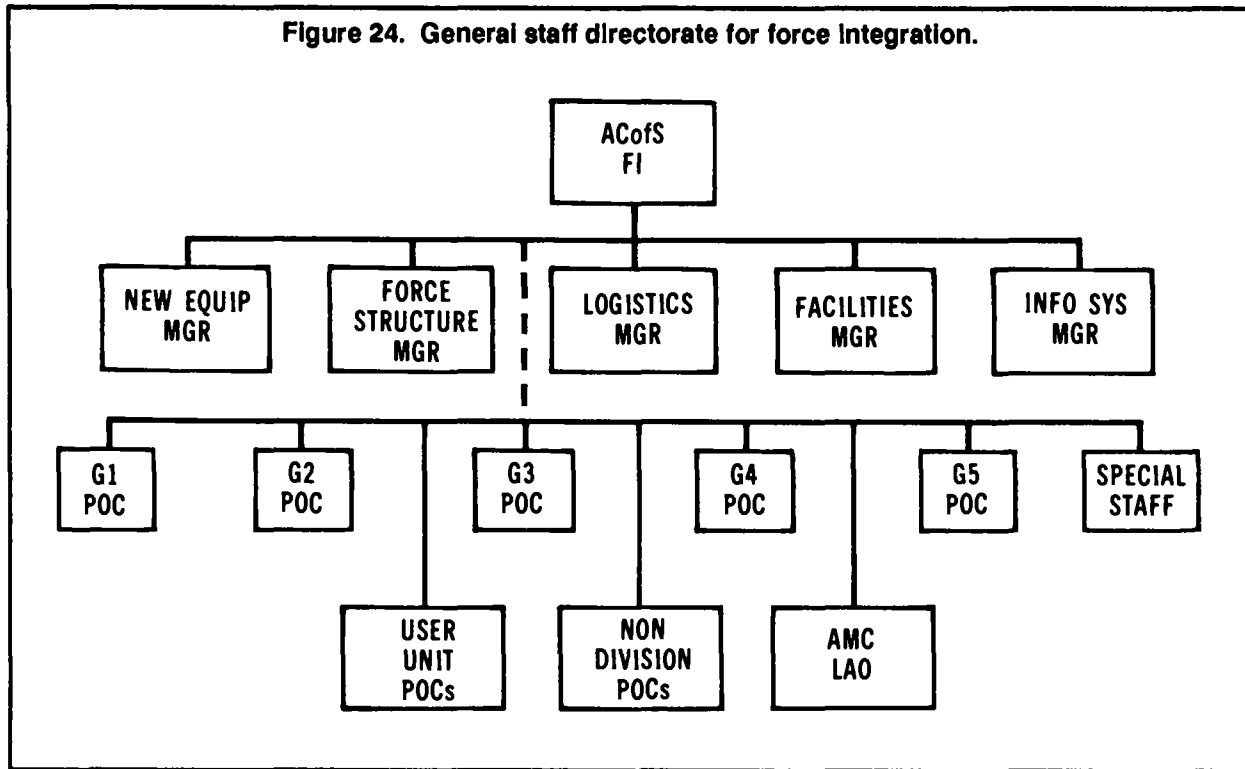
activities. However, this approach is extremely resource-intensive and is accomplished at a cost to other staff sections. Its size alone invites other staff sections to abdicate their force integration responsibilities because of who has the resources and expertise.

This new centralized staff element for force integration may be created using the G3 TDA personnel allocations as a base (Figure 24). It becomes the "corporate long-range planner" for the division commander, his traditional staff, and fielding units. Explicit in the charter for a separate staff section are two key concepts. It should be charged to act as the division's single point of contact both internally and externally and for all force integration actions, including—

- AirLand battle systems review.
- New force structure.
- Personnel changes.
- Modernized equipment with associated logistic and personnel trails.
- Facilities and stationing.
- Doctrinal and procedural strawmen for brigade slice and division staff training.

The section should also be centralized to—

Figure 24. General staff directorate for force integration.



- Manage information flow and long-term planning
- Clear the "underbrush" for the tactical commander and division staff.
- Coordinate efforts of the division staff and other nondivisional players.
- Intensively manage the handoff of future planning to the rest of the division staff as each force integration action is completed and becomes part of the "here-and-now" execution.

(It is important to note at the outset that this general staff section is not organized to do the work of the other staff sections; rather, it is organized to perform the "cueing service" outlined previously through the management of information flow to let other staff sections know when it is time to do their normal staff function for a given force integration action. The section does long-range force integration planning and monitors the execution of those associated actions for the division. It performs cueing through the use of a POC in each general and special staff section, fielding unit, installation, et cetera.)

The Power-Down Approach

This approach functions with a small central management cell. It depends heavily on other staff elements for functional expertise. Its primary purpose is to orchestrate the force integration process and facilitate interstaff communication. It is a very efficient use of scarce manpower resources, especially when used in association with automated data management. It also gets the primary division staff and subordinate commanders involved in the integration process. It is very dependent, however, on how well the management cell can maintain interest and exact effort early in the process from other staff elements. For this reason, visibility is an important factor in how well this approach works. Mistakes and oversights early in the process can snowball into major problems as initiatives near implementation.

This approach also becomes less effective during periods of intense change. The management cell can simply be overcome by requirements. Automated systems can help during these periods. Other staff elements can also pick up some of the burden although this may be an awkward handoff. There also appears to be a limit to the utility of this

approach. It is typically used to deal only with single functional issues, such as new equipment, with other functions spread among other primary and special staff elements.

Management Techniques

There are several management techniques that can supplement these approaches. They are meant to reinforce weaknesses that might exist in whatever organizational structure is established. They may be permanent but are most often used as temporary fixes during periods of increased activity.

The functional manager technique. This technique was mentioned previously but requires some additional comments. When manpower is scarce, the use of functional experts is most cost-effective. Functional experts can deal with any problem in their area of expertise across a range of organizations. For example, a personnel expert can articulate the requirements associated with MOS reclassification in an infantry battalion as well as stabilization criteria for pilots in a new attack helicopter company. As a team, functional experts are an excellent way of covering all the bases in force integration planning and execution. This technique lends itself to additional manpower savings by doubling up functional responsibilities within a single position where possible; that is, personnel and training.

The system manager technique. This technique assigns the responsibility for coordinating the fielding of a new materiel system to a specific individual. Taken in isolation, this can seem to be an impossible task. However, by working with a team of functional experts, a system manager can handle it. This technique is most effective when the individual chosen remains with the proponent or fielding unit. He must maintain a close working relationship with, or even come under the direction of, the force integration staff. His presence in the unit keeps the action visible to those who must eventually make it happen. He creates a quick, direct link to the division staff for all and any issues connected with fielding. Because this is usually a temporary or even additional duty, most individuals assigned to it are valuable if some "fundamental" education is available to assist them. Even after this training is accomplished, it is recommended that updates be continued to chart

progress and provide additional assistance when needed.

The staff POC technique. To facilitate quick communications between the primary staff and force integration staff, POCs can be assigned in each primary staff element. These POCs deal with force integration as an additional duty but provide a quick conduit for information in and out of a primary staff office. They also quickly become that section's window on the future. How these POCs are used is very important. They are valuable in facilitating interstaff coordination but, when misused, they can, in fact, damage these relationships. Remember, they work with the force integration staff, not for it.

The special task force technique. Certain force integration initiatives may create large, short-term administrative and control problems. These are best handled by a special task force, a group of individuals taken from within the current organization and shifted from other primary duties to handle large workloads of limited duration. A major division reorganization is a good example of this type of situation. The requirement to transfer large numbers of people and equipment while maintaining accountability may force the G1 and G4 to set up a temporary task force to maintain control of the situation. This technique is very practical because it is flexible. It allows manpower resources to quickly shift to critical points on the integration battlefield. But it sometimes falls short of expectations. Even while the task force may contain many experts, they are all dealing with a one-time action that may negate their experience.

The special or standing committee technique. This technique provides an excellent means to keep commanders and primary staff officers informed and involved in the force integration process. These committees meet on a regularly scheduled basis to discuss and review future and on-going force integration initiatives. The meetings are often held in conjunction with similar gatherings, such as monthly readiness reviews and quarterly training updates. Division commanders can exploit these opportunities to keep horizontal priorities enforced, generate corporate discussion and thought, and receive feedback.

Depending on the situation, any or all of these techniques may have to be used to accomplish force integration tasks.

SECTION VII. ORGANIZATIONAL CONSIDERATIONS FOR MANAGING THE INTRODUCTION OF NEW EQUIPMENT

The fielding of modernization equipment systems is a multidimensional activity that has far-reaching impacts on a corps or division. The complex equipment programs (dealing with, for example, the introduction of the Bradley fighting vehicle) touch all facets of the variables of force integration. A change in one area (for example, facilities requirements) is likely to have a domino effect within the parameters of one equipment program or functionally among numerous pieces of equipment. Within any of the techniques or approaches Section VI discusses, successful management of change lies in adopting a total system approach. This approach facilitates—

- Comprehensive long-range planning at every level of command.
- Use of structured review processes to assess

the status of meeting mandated force integration requirements.

- Retention of maximum flexibility to react and adapt to change.

Effective management of the new equipment function must rely on close and continuous coordination, centralized master planning, and decentralized system management and execution. Timely, detailed, and complete execution of all prefielding activities can be met through a system manager process. System management responsibility is assigned to a staff section or unit. The chief or commander designates a system manager. The system manager is assisted by force integration action officers from staffs and units. Section VIII discusses these key players' specific functions.

NOTE: For the remainder of the chapter, the phrase 'fielding new equipment' is used synonymously with the phrase 'force modernization.'

SECTION VIII. FORCE MODERNIZATION ORGANIZATION

The concept for the unit's organization should involve several primary players, structured groups or forums, guidance, planning, and documentation to provide direction and to ensure that required actions are accomplished. Organizational design should ensure the involvement of the entire chain of command in the management process.

Primary Players

Commanders, primary and special staff officers, directors, and installation staff involvement includes certain functions. Each person must maintain an awareness of required actions, make or participate in decisions, and accomplish required actions. He must accomplish all this within stated suspenses and according to plans developed and issued for implementation. Staffs retain traditional functional responsibilities.

The senior force integration staff officer is the primary staff proponent and executive agent. He plans, coordinates, and executes equipment-related

actions specifically and force integration activities in general.

A system manager is an action officer assigned to the organizational force integration office or another staff section, organization, or agency. He performs specific tasks and coordinates actions for one or more designated new materiel system(s) to be fielded to the organization. Because of normal unit staffing limitations and time constraints, limited experience of personnel, equipment complexities and densities, normal functional responsibilities, and planned distribution schemes, each system must be examined to ascertain where it can best be managed to ensure that all fielding requirements are accomplished.

The following principles should be used when assigning system managers:

- Each system should be assigned a system manager.
- System management responsibilities will be assigned to an organization or agency. The

commander or chief should designate systems managers. Integration goals are best met when the designated systems manager has a vested interest in the equipment.

- The senior force integrator will monitor the status of all systems regardless of where system management responsibility is assigned. Depending on staffing within each organization, the force integration office may accept responsibility for system management of major systems. A major system is defined here as one which will be fielded in more than one major subordinate organization, or in large numbers, or is a high-visibility item. An example where system management responsibility would be assigned to a subordinate organization is when a system requires particular expertise to ensure proper fieldings or is unique to one organization.
- Regardless of the placement of new equipment management responsibility, the force integration office should always be the agency that coordinates with external agencies.

A designated systems manager might face the following responsibilities:

- Acting as the single POC for designated systems.
- Ensuring timely, detailed, and integrated planning and execution of force integration actions.
- Using fielding models to guide planning and coordination actions and maintaining records of actions.
- Assisting in the Modernization Resource Information Submission (MRIS) and Command Operating Budget (COB) process and resource utilization monitoring.
- Assisting integration in the preparation of unit LOIs for the force integration office.
- Visiting subordinate commands, agencies, and activities to discuss system fielding progress, identifying and resolving problems, and ensuring that required actions are completed on time.
- Preparing and presenting periodic information in-process reviews (IPR) of assigned systems to unit key personnel as required.

- Hosting the new equipment introductory briefing for assigned systems in coordination with the unit force integration office.
- Attending program reviews or coordination meetings, as required in coordination with the unit force integration office.
- Reviewing AMIM, materiel fielding plans, and distribution plans; disseminating information, as appropriate, to determine system impact; and developing alternate distribution plans for command review, if appropriate.
- Identifying problems related to new equipment fieldings and associated actions and participating in resolving problems.
- Serving as a member of force integration-related councils from designation to system fielding.
- Participating as a member of organizational management networks.

Force integration action officers (functional managers or staff POCs) are designated officers, noncommissioned officers, or civilian employees located in staff sections, subordinate organizations, and installation agencies. They are appointed by the commander or staff section chief and are charged with performing specific force integration tasks as related to their parent organization or staff element. This scheme allows for aspects of all equipment fieldings, as well as the other force integration variables, to be addressed functionally and horizontally.

The types of designated Force Integration Analysis Office (FIAO) responsibilities are—

- Receiving and transmitting all working documents and information within the organizational management network and making required distribution within their organizations.
- Coordinating with and advising other members of the organizational management network on unit or agency involvement in force integration actions. This includes estimating impact and reviewing proposed dates and time lines with unit training plans or agency schedules.

Chapter 6

- Ensuring that reviews of materiel fielding plans and fielding documents are completed, including preparation of comments on drafts, identification of unit or agency-specific requirements, and initiation of necessary actions.
- Acting within their organization to ensure that required force integration actions are accomplished in a timely and responsive manner and that information and reports are passed to the force integration staff office and other designated key action personnel.
- Representing their unit or agency as required and attending prefielding conferences and meetings.
- Identifying problems related to force integration actions and participating in problem resolution.
- Performing system manager responsibilities, when designated, for a specific system.

Key Management Activities

Management execution of new equipment fielding actions requires continuous coordination by all agencies. The activities can be established according to the needs of each command but should involve routinely scheduled meetings, membership, and special-purpose forums.

Routinely Scheduled Meetings

Sessions involving commanders and staffs and other structured functional sessions (such as PBAC or USR briefings), which meet on a regularly scheduled basis, can be used to exchange and discuss new equipment fielding information and surface minor issues. To aid on-going management of force integration actions, action officer level forums may be established. These groups of designated systems managers and force integration action officers would meet routinely and coordinate, plan, and share information. Their responsibilities would be—

- To review on-going force integration programs.
- To evaluate projected new equipment fieldings.
- To share information.

- To develop plans for pending actions.
- To analyze options for future activities.
- To revise procedures.
- To ensure fully integrated efforts.
- To develop policy recommendations.

Membership

An action officer-type organization is composed of the following representatives:

- Chief force integrator in the organization.
- Force integration action officers from each subordinate unit and each internal and external staff agency.
- Systems managers as appropriate.

Special Purpose Forums

The following represent special purpose forums:

Executive committees. These executive-type committees would meet—

- To receive, research, and analyze force integration missions.
- To formulate policy and guidance recommendations.
- To coordinate special presentations for higher level forums.
- To resolve crisis situations.

Membership. An executive-type organization composed of key representatives from the following functional areas:

- Force integration office.
- Operations, plans, and training.
- Facilities master planning.
- Force development.
- Comptroller.
- Personnel management.
- Supply and service.
- Maintenance.
- Directorate of Industrial Operations (DIO) (if applicable).
- Army Materiel Command (AMC) LAO.

Command reviews. These forums are conducted quarterly, or as required, as an informational and decision-making activity for commanders. The purpose of such reviews is—

- To review the status of force integration actions.
- To gain decisions for proposed actions.
- To share information.
- To establish policy and strategy for force integration.

Command reviews are composed of the following personnel:

- Commander.
- ADC(s).
- CofS or executive officer.

- Director of Personnel and Community Activities (DPCA).
- G1.
- G2.
- G3.
- G4.
- DIO.
- Facilities Engineer (FE).
- Comptroller.
- Adjutant General (AG).
- DPCA.
- Subordinate commanders.
- Force Integration Office employees.

CHAPTER 7

Modernization Information

Proper planning, coordination, execution, and sustainment of modernization programs are based on the timely availability of numerous information, guidance, and coordination documents. Individual action-officer and unit-staff effectiveness relies on the expert access, interpretation, dissemination, and application of information produced by HQDA, TRADOC, fielding agencies, and gaining MACOMs or installations.

SECTION I. DOCUMENTS PRODUCED BY HQDA

Headquarters, DA, is responsible for the production of three documents to be used in the modernization process.

The Army Modernization Information Memorandum

The AMIM (DA Pamphlet 5-25 and its classified supplement 5-25-1) is a biennial DA ODCSOPS publication that provides system-oriented information for new systems being fielded to MACOM organizations. The AMIM is used by all MACOMs and HQDA for planning, programming, and budgeting resources to operate and support the fielding of new and displaced equipment. In addition, the Army staff uses the AMIM as a primary source for review of force modernization program and budget submissions and as a baseline for justification of programs before DOD agencies and Congress. Aside from programming uses, the AMIM meets many MACOM information requirements to plan for equipment modernization. Information is provided by materiel, combat, and training developers and by the Army staff.

Systems included in the AMIM are projected for fielding (or transfer in the case of displaced equipment) during the POM period plus two years.

Systems displayed are based on practical requirements and the extent of data for each modernized system. Accordingly, four levels of data detail are provided. These systems are—

- The intensively managed (IM) form system.
- The standard form (SF) system.
- The displaced form (DF) system.
- The abbreviated form (AF) system.

The Total Army Equipment Distribution Program (TAEDP) Distribution Plan

The TAEDP is a computer-assisted system which compares force requirements and priorities against on-hand assets and projected deliveries. It produces an equipment-distribution program for the Army for the current year, the budget year, and the five program years. Deliveries consist of new procurement, depot maintenance returns, and redistribution of displaced equipment or assets generated through force structure changes. The actual modernization equipment distribution plan which will guide MACOMs and subordinate commands is a specific product of the TAEDP.

These plans, along with the entire TAEDP, are processed to align with the DOD and DA budgetary process. The ODCSOPS, HQDA, is

responsible for determining the strategy and priority for distribution. Generally, distribution is accomplished in Equipment Readiness Criteria (ERC)-A/Department of Army Master Priority List (DAMPL) sequence but recognizes other directed priorities.

The MACOM's use of the TAEDP distribution plans, together with continuous coordination with the DA staff, is a basis for developing detailed internal distribution plans. These are distributed to subordinate commands, installations, and agencies by various means (for example, software package).

The Facility Support Plan.

Facility support plans are developed and prepared by the US Army Corps of Engineers and are intended to be used as general informational planning guidance documents. Information in FSPs are adjunct to the material provided in the facilities section of the AMIM. They address the facilities impact of modernization programs from two perspectives—individual equipment systems and

organizations. The user must compare the facility requirements identified in the FSP with existing facilities, facility inventories, and stationing plans to determine modification or construction requirements. The number and type of personnel are provided to allow programmers to determine requirements for barracks, dining facilities, chapels, or family housing.

The FSP will eventually be replaced by the support facility annex (SFA), which will provide expanded information to support the facility planning process. The SFA is part of the automated programming, administration, and execution (PAX) system located with the master planner for facilities on each post and installation. The computer-driven model will allow the installation planner to compare the requirements of a new materiel system or organization into existing facilities and identify future requirements. The final products of the analysis can be stored in PAX and provided as paper copy. The SFA can be produced in the same manner.

SECTION II. DOCUMENTS PRODUCED BY TRADOC

The Training and Doctrine Command is responsible for producing TOEs and BOIPs.

Tables of Organization and Equipment

A TOE is a requirements document that provides information on a unit's mission, capabilities, and limitations. It describes in detail the minimum essential personnel and equipment requirements to effectively accomplish the stated wartime mission. A TOE represents the Army's base organizational document for combat, combat support, and combat service support units. The TOEs are used by the Army's field commands as models for structuring their modification TOEs. TRADOC is the DA proponent for all Army TOEs. TRADOC schools, Health Services Command (HSC), Intelligence and Security Command (INSCOM), Information Systems Command (ISC), and the integrating centers have TOE subproponent responsibility. They develop (or recommend) new TOEs or changes to TOEs in coordination with all affected TRADOC agencies. Headquarters, TRADOC, maintains and updates the automated TOE file.

Basics of Issue Plan

The BOIP is a planning document which states the number of new items of equipment and personnel to be included in TOEs, TDAs, joint tables of allowances (JTA), and additive operational projects (AOP). The BOIP states other equipment and personnel changes to those information sources that are required to support the new item of equipment. Headquarters, TRADOC, is responsible for development and staffing of BOIPs. The BOIP serves as a management tool for—

- Headquarters, DA, to forecast and document logistic support and distribution planning for new items of equipment or systems entering the Army Supply System.
- Combat developers to update TOEs.
- The MACOM to update TDAs and other authorization documents and to program for other equipment, facilities, initial provisioning, personnel, and funds needed to support new equipment.

SECTION III. DOCUMENTS PRODUCED BY FIELDING AGENCY

In materiel development, the fielding agency is responsible for the production of NETPs, MFPs, and material transfer plans.

New Equipment Training Plan

The NETP is a component of the new materiel development and fielding process. The NETP describes Army strategy for the initial transfer of knowledge on the operation and maintenance of new equipment from the materiel developer to the tester, trainer, and user. The NETP covers all training aspects of the equipment from procurement or development and testing through production and fielding. The plans are developed, coordinated, published, and distributed by the materiel developer for each item of new or significantly modified equipment for which training is required. This includes ancillary items such as training devices. As materiel, operations, maintenance, and fielding concepts change during the development of the system, the NETP will be revised accordingly. The plans will be updated semiannually and published as a part of each United States Army Materiel Readiness Command's (that is, TACOM, AVSCOM, TROSCOM) consolidated new equipment training plan (CNETP).

Displaced Equipment Training Plan

Displaced equipment training plans are developed for all designated displaced systems

identified as requiring operation, support, and maintenance training. Like NETP, DETP will be developed to train staff planners, users, supporters, and trainers and will assign responsibilities, estimate costs, identify resources required, and describe the training strategy to be followed. TRADOC develops DETPs for AC displaced-equipment training. FORSCOM or WESTCOM develops DETPs for the USAR and Chief of the National Guard Bureau for the ARNG.

Materiel Fielding Plan and Materiel Transfer Plan

The MFP contains the detailed plans, actions, and schedules required for successful processing, deployment, and sustainment of a new materiel system into a user command. The materiel developer or fielder, in coordination with ILS program participants and gaining MACOMs, is responsible for preparing, negotiating, and coordinating the MFP. An MFP is tailored in one of two ways, either through a separate MFP for each gaining MACOM or through a single MFP covering multiple gaining MACOMs. An MFP is also required for initial distribution to the designated trainer (normally TRADOC). Distribution to POMCUS may also necessitate an MFP. The MFPs are required for all first time fielding of logistically significant new or product-improved systems. The Materiel Transfer Plan serves the same purpose for displaced systems as the MFP does for new systems.

SECTION IV. DOCUMENTS PRODUCED BY GAINING MACOM OR INSTALLATION

The gaining MACOM or installation is responsible for producing MTOEs, TDAs, and MSPs.

Modification Tables of Organization and Equipment

An MTOE prescribes the unit organization, personnel, and equipment needed to perform an assigned mission in a specific geographical or operational environment. An MTOE is required

to designate the ALO and provide other data such as unit designation and the E-date. The MACOMs are the proponents for developing, processing, and allocating resources among claimant organizations documented in MTOEs.

Tables of Distribution and Allowances

A TDA prescribes the organization, personnel, and equipment needed to perform a specific

support mission. Designated units are basically nondeployable and organized to fulfill mission, function, and workload obligations of a fixed support establishment in CONUS or overseas. The tables usually include civilian manpower. They are developed from DA staffing guides that provide manpower yardsticks for specific functions in common TDA activities. The MACOMs are proponents for TDAs.

Mission Support Plan

The MSP is another component of the materiel fielding planning process. An MSP is prepared by the gaining MACOM to advise the materiel fielder of the using and support organizations (both AC and RC) components stockage points, and preferred method of shipment (push or pull

system). Reserve Component units required to support the system in peacetime and on mobilization must be included in the MSP. Support units for equipment being deployed to POMCUS and theater reserve stocks should be included as well. The MSP will be used by the materiel fielder to compute procurement quantities of support material and by the trainer to quantify both AC and RC training requirements. Based on the equipment distribution schedule, the MSP will identify the required associated support items of equipment (ASIOE) and organizational support equipment. This is done by specifying projected stock levels for maintenance and supply support activities in the gaining MACOM. Coordination and finalization of the MSP coincides with established MFP milestones in the fielding process.

CHAPTER 8

Structuring

Army units are designed to perform specific missions. The resources, manpower, and equipment that enable a unit to accomplish its mission are allocated to the unit by MTOE and TDA. The process in which MTOEs and TDAs are produced involves both the force structure and documentation processes.

In the early 1980s, modernization and reorganization efforts were introduced within the US Army. Since then, force structure development and documentation have had an increasing role in the Army's readiness and sustainment. The introduction of more than 400 new systems into new organizations designed to maximize these systems' capabilities is one of the most difficult tasks now facing the Army. This extensive change and its impact on the documentation system has resulted in a HQDA initiative called Documentation Modernization (DOCMOD). Although the DOCMOD study group was disbanded in 1986, the DOCMOD initiatives are being incorporated into the Army.

The DOCMOD initiative instituted substantial changes in the development of unit MTOEs. The living TOE (LTOE) process will significantly decrease the amount of work involved in the documentation process at MACOM, corps, and division levels. The LTOE process will also provide an accurate picture of a unit's capability and will form a sound basis for evaluation of unit readiness. This chapter provides the tools required at corps and division level in the documentation process as it exists today and introduces DOCMOD initiatives.

SECTION I. CORPS AND DIVISION ROLES IN FORCE STRUCTURE ACTIONS

The correct documentation of force structure and equipment changes provides the key to successful management of change in units undergoing force integration actions. Only with accurate documentation can a unit gain the authorization to requisition and receive the correct equipment and manpower to accomplish its assigned missions.

In order to maintain sustainable and combat-ready units, action officers at corps and division levels must be involved in their units' structuring

and documentation. With knowledge of how the force structure and documentation systems currently work, action officers can make a positive contribution to the system and decrease the impact of change on their units. Detailed knowledge of the following factors will enable units to successfully manage force structure change:

- HQDA, TRADOC, and MACOM actions.
A clear understanding of who manages

change is necessary in order to provide the correct input at the right time and place.

- **Horizontal management.** Impact of change in personnel, equipment, and organizational structure must be considered as an action in which the entire organization is involved. For example, fielding a new vehicle in an infantry battalion will also change the personnel and equipment needed in the forward support battalion. It will also involve change at the corps level support command (SUP-COM). Without resourcing the new system or organization in depth, the system may not be supportable and could have a subsequent, adverse impact on readiness.
- **In-depth knowledge of documents.** Detailed review of past documents (MTOEs) and future documents (either TOEs, MTOEs, TDAs, or LTOEs) is required and should be done on a line-by-line basis. Much of the detailed work can be reduced if the action officer knows what products can be obtained from the Vertical Force Accounting System (VFAS), Standardized Property Book System (SPBS), and Installation, The Army Authorization Documents System (ITAADS).
- **In-depth knowledge of critical items and equipment.** Availability of key items of equipment and their status, overages or shortages, must be managed along with the documentation process. When equipment status is not considered during unit documentation, readiness problems can develop because of shortages, improper distribution, or improper documentation.
- **In-depth knowledge of unit organization and manpower structure.** Knowledge of the organization and the manpower required to perform assigned missions is necessary for detailed review of documents (TOE or MTOE). Review should consider both personnel and equipment structure within a unit, such as a battalion, and must also consider the impact upon other units associated with it in accomplishment of its mission.

This chapter provides information on how the corps and division can manage force structure change to minimize the impact of change within their organizations.

SECTION II. CORPS, DIVISION, AND SEPARATE BRIGADE DOCUMENTATION REVIEW AND INTERFACE WITH MACOM

To ensure that MACOM subordinate unit requirements are recognized, staffed, and planned for, coordination between the commanders and staff must occur. This is a normal manner of business within the US Army. However, with the increasing pace of introducing new equipment and force structure changes, this coordination must be timely, accurate, and complete. Commands should recognize that force structure and documentation actions must be studied with all impacts considered horizontally. The staff must look at both the actual unit undergoing force structure changes and units required to support it. Manpower, funding, training facilities, and support facilities must be considered. This means the entire staff is either involved or, if no action is required, informed. Once issues have been developed with a horizontal view, the action should be forwarded to the

MACOM where the impact of the action must again be reviewed in a horizontal manner. Many documentation problems can be reduced by early review (done in detail) with an audit of equipment and manpower and balanced against projected fill prior to the E-date (for a given MTOE). Coordination with the MACOM, corps, and installation staff allows the subordinate staff to obtain the necessary tools to review documents early and conduct the necessary follow-up. The primary tools required to conduct a documentation review will be the draft TOE, TOE, current and future MTOEs, and in-lieu-of (ILO) action historical records.

Documentation Review Requirements

Upon receipt of a new document (BOIP, draft TOE, TOE, or MTOE), the staff review normally consists of—

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- Identifying administrative errors that do not change resource requirements, manpower, or equipment.
- Identifying and resolving conflicts between BOIP and TOE requirements.
- Identifying substantive changes, such as personnel and equipment shortfall or overages as opposed to requirements on MTOEs or TDAs, against requirements on BOIP.
- Identifying doctrinal issues that require restructuring of TOEs or MTOEs and may involve either administrative or substantive changes.

The MACOM can work and resolve the issues involved with administrative errors, personnel shortfalls, and equipment shortfalls. Doctrinal issues that require restructure of the MTOE, and therefore the TOE, must be resolved by TRADOC. The MACOM does not have the authority to restructure a TOE. Identified doctrinal issues must be forwarded through the chain of command to TRADOC and its proponent schools for resolution.

Staff Action on Draft TOE

The draft TOE is produced by the TRADOC proponent school and is a staffing tool used to obtain MACOM comments on a new organization. It is normally forwarded to the MACOM with a limited response time. The MACOM will forward the draft TOE to its subordinate units. Within time constraints, corps and divisions should conduct the review from the lowest possible unit level.

The draft TOE is valuable because it provides the first review of a unit from an organizational perspective, contains the justification for the organization's development, and details information on the organization's structure. It also presents an opportunity to comment on doctrinal and structural issues associated with the new unit. The MACOM consolidates all of the comments and issues and forwards them to TRADOC and the proponent school. TRADOC considers the input when developing the TOE for HQDA approval. The MACOM should also provide its subordinate units with information copies of the response to TRADOC.

While the draft TOE is not HQDA approved and cannot be used as a basis for development of an authorization document such as an MTOE, it should be retained by all commands involved since it does contain reference information on the organization that will not be found in later documents. If a command has not received a draft TOE from the MACOM, and it is aware of a major structural change in one or more of its units, the command should request MACOM assistance in obtaining a copy.

Staff Action on TOE

Detailed review of the TOE by all commands is vital to provide accurate documentation of the MTOE. The MACOM and installation staffs currently receive updated and new TOEs twice a year in the CTU process. When the TOE arrives in the MACOM, the staff must review requirements in the areas of force structure, manpower management, documentation, and materiel management. MACOM actions during each documentation cycle follow.

Force structure. MACOM planning formally begins with guidance provided by HQDA. The guidance provides necessary information to begin developing issues and programming of force structure in the future. Based on input from MACOM evaluation, HQDA develops the program force which, while not fully supported, provides a balance between resource availability and force capability. Since this force is oriented two to six years in the future, MACOM staffs evaluate it against manpower authorizations, equipment availability, facilities, and other restricting factors to determine and resolve issues prior to final determination of the budget force. The budget force is drawn from the first two years of the POM. During the final resolution of the budget force, the MACOM ensures that the manpower spaces allocated match the force structure in detail.

Manpower management. Manpower management within the MACOM begins with development of issues and requirements in the out years and deals in detail with the budget force. Both planning and programming must comply with HQDA guidance and must be programmed within the totals of the authorized Army ES for the MACOM. Each MACOM responds to the guidance by

submitting a command plan reflecting its planned distribution of manpower spaces by unit identification code (UIC). Subordinate commands contribute to this process through the VFAS, MRIS, and selected issues that impact on the mission and are unique to the command. When approved, the command plan then becomes the basis for submitting MTOE and TDA documentation to HQDA. This provides a means for ensuring that the number of positions in authorization documents do not exceed the number of manpower spaces allocated.

Documentation. After spaces have been allocated against the structure and the command plan has been approved, the MACOM staff then documents units through development of MTOEs and TDAs. Under the current MOC concept, MTOEs and TDAs are submitted twice yearly during two MOC windows, January-March and July-September (Figure 25). The primary basis for building the MTOE is the TOE developed at TRADOC proponent schools. TRADOC and HQDA must approve the TOE prior to use for MTOE development. The MACOM receives computer tapes of approved TOEs prior to the start of the MOC window. This allows the MACOM and

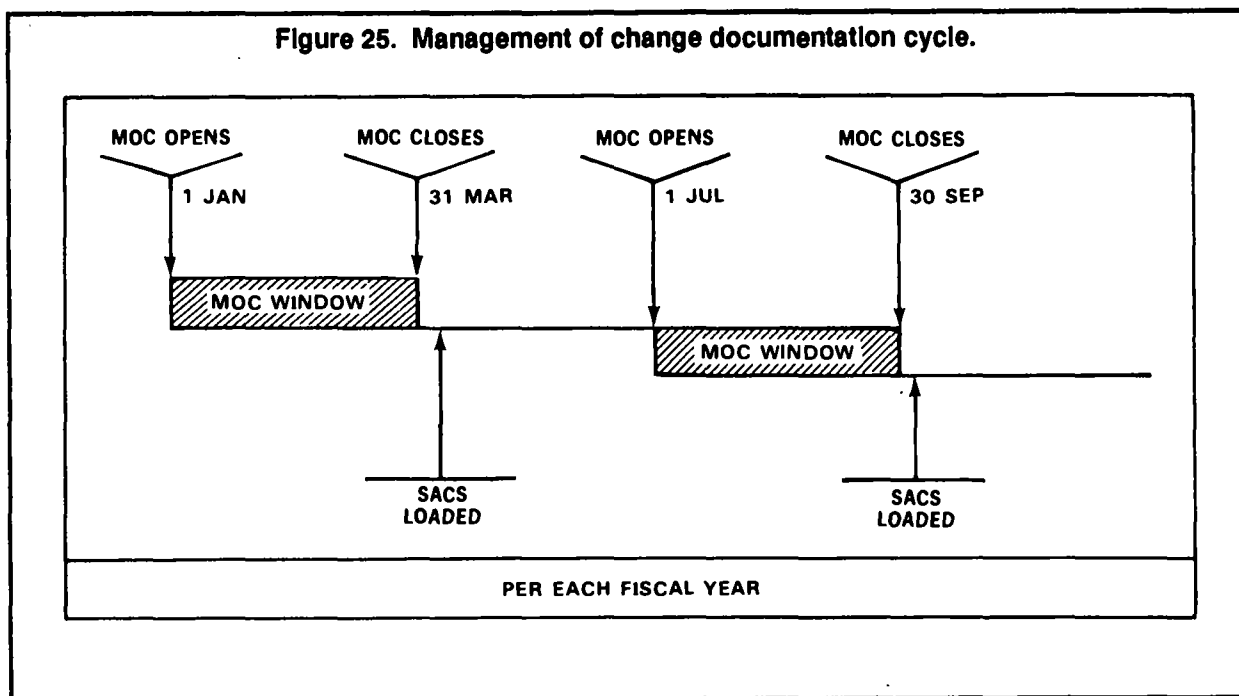
subordinate units to review the TOE 12 to 18 months prior to the MTOE's E-date.

Materiel management. Concurrent with force structure and documentation, the MACOM manages the distribution of equipment allocated to units within the command. Management of systems includes new equipment, current equipment, and displaced equipment.

The MACOM coordinates dates of deployment with the materiel developers, HQDA, and subordinate units to receive new equipment. In determining fielding dates, the MACOM ensures that adequate documentation, in the form of an MTOE, is available to the unit at least a year (210 days in CONUS; 300 days in OCONUS) prior to the issue date and with an E-date within one month of issue of new equipment to the receiving unit. This allows for issue of the equipment, if not fielded by a materiel fielding team (MFT), and authorizes the unit to requisition spare parts for sustainment.

Many factors within the unit, DA, and materiel development have an impact on the documentation of the E-date. Therefore, MACOMs must coordinate all issues with commands to ensure the E-date is properly aligned with equipment issue and

Figure 25. Management of change documentation cycle.



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reorganization. Additionally, NET must be planned and coordinated for the receiving units.

The status of equipment that units are currently authorized and equipment that units actually have on hand must be maintained if documentation is to be accurate. The MACOM must be prepared to identify equipment shortages, determine an appropriate ILO item, and document the new authorization. DA Pam 700-25, the Class VII substitution list, TRADOC proponent schools, materiel developers, and HQDA provide assistance and information on adequate ILO items for equipment shortages. The MACOM DCSOPS must also ensure that current equipment is distributed according to HQDA priority, supports mission accomplishment, and supports contingency plans.

When new equipment has been issued, HQDA directs redistribution of the displaced equipment. These items are then used to fill shortages within the active Army or MACOM, are rebuilt for issue to the Reserves or National Guard, placed in war reserves, or used in foreign military sales. If items are to be redistributed within the Army, MACOM, Reserves, or National Guard, the receiving command staff must ensure this equipment is documented in the same manner as new equipment.

As stated previously, it is important during the MACOM documentation process that subordinate units and installations play an active role in their MTOE's development. Once the TOE computer file has been received, printouts of the TOE can be produced. Copies of new TOEs should be provided to like-type units for review and information. Upon obtaining TOEs, commands should determine the closing date for input to the MACOM or installation during the MOC window. A horizontal review of the document must be conducted by all involved commands and staffs. If changes are necessary, the chain of command must be informed and changes forwarded to the MACOM. Prior to the close of the MOC window, most MACOMs conduct a line-by-line scrub of the TOEs and issues. Changes that are approved at MACOM from the scrub are included in MTOE computer files. As a quality control check, units should ask for an up-to-date computer printout of the MTOE to ensure that the approved changes have been included. This computer printout is *not an authorization document*, but it can show what the MTOE will look like after being approved by

HQDA. If administrative errors or omissions are discovered at this point, immediate action and coordination will be required with the MACOM staff to make corrections prior to dispatching the MTOE computer files to HQDA at the close of the MOC window.

Key Items on TOE

The TOE consists of three sections. Section I lists the unit's organizations and equipment. The organization subsection consists of—

- The organization chart.
- The unit's mission.
- The unit's capabilities at each level (1, 2, and 3).
- The basis of allocation among other TOE units.
- The unit's category per paragraph 2-14, AR 310-31.
- The unit's mobility as expressed in a statement of what is required to lift or ship from one point to another.
- Doctrinal publications that apply to the unit.

The subsection on equipment includes the—

- Identification of authority for requisition and issues.
- List of applicable indexes covering technical manuals, supply manuals, and supply bulletins for expendable items.
- List of applicable CTA.
- Additional instructional remarks as required.

Section II consists of the number of personnel required by the unit to perform the mission stated in Section I. The following items are included:

- Distribution of personnel by numbered paragraphs.
- Recapitulation of total personnel by grade and MOS.
- Remarks subsection identifying additional skill identifiers (ASI) and personnel information.

Within the personnel section, checks should ensure that—

- Adequate personnel are available to accomplish the mission.
- Personnel are MOS-matched to the job they must do.
- MOS-trained personnel will be available to fill positions when TOEs are used to produce MTOEs.
- ASI requirements meet the need of the unit to accomplish its mission.
- The unit is structured correctly to accomplish its doctrinal mission.
- Adequate force structure spaces have been programmed to meet requirements of the unit when TOEs are used as basis for MTOEs.

Section III prescribes equipment requirements for units except for those items authorized by CTA, repair parts, accessories, and expendable items listed in TMs, supply bulletins (SB), and supply catalogs. It consists of the following:

- Distribution of equipment by numbered paragraphs corresponding to Section II.
- Recapitulation by summarizing total equipment allowances.
- Remarks needed to clarify the equipment section, such as the distribution of equipment for specific personnel.

Within the equipment section, the checks should ensure that—

- Adequate equipment is allocated to accomplish mission.
- Distribution of equipment within TOE supports mission accomplishment.
- Equipment is available or will be available for the unit when TOEs are used to produce MTOEs.
- Adequate ILO items are available to support mission accomplishment if equipment is not available.
- All special tools and test sets required to support major end items are present.

Staff Action on MTOE

At the close of the MOC window and after HQDA approval, the MACOM and installations will produce the MTOEs and TDAs with formal orders for issue to units. The G1, G3, G4, force integration staff, property book officer, and the unit, as a minimum, should again conduct a review of the MTOE to ensure that prior approved issues have been correctly documented. Any required changes must be passed through the chain of command to the MACOM. The MACOM has the following options available to resolve problems:

- Administrative errors can be corrected by publishing a change to the MTOE. This is only necessary in cases where the MTOE has an E-date prior to close of the next MOC window or the MTOE has already taken effect.
- Administrative errors or omissions can be corrected during the MOC window if the E-date falls after the next MOC window and the need to make the change is not critical for requisition prior to the MOC window.
- Those ILO items incorrectly documented or omitted can normally be corrected in the next MOC window. Until the correction can be made, or an item added to the document, a MACOM can normally provide readiness reporting guidance and authorized ILO items by message to units in the command.
- Detailed files of prior MTOEs, MTOE actions, and new MTOEs must be maintained by the command to provide a basis for review and a historical record.

Key Items on MTOE

The MTOE is an authorization document and, when issued to units, it must be accurate. Accuracy helps eliminate "instant unreadiness" or "paper unreadiness" problems created when a unit has been authorized new items which it does not have on hand. If detailed work has been completed with MACOM and installation staffs, the review of the MTOE will be confirmation that work accomplished with the TOE has been included. Key items on the MTOE include—

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● Orders.

Check:

1. Are orders current and for correct units?
2. Are all units of like type on the same order to ensure standardization?

● E-date on MTOE.

Check:

1. Can organization meet readiness requirements on assigned E-date?
2. If coordination has been conducted with MACOM, is E-date correct as coordinated?

● Section I (Administrative Information).

Check:

1. ALO to determine equipping and manning level for review of equipment and personnel.
2. Category of unit to ensure it is consistent with AR 310-25.
3. Command Control Number (CCNUM) to ensure document is the correct one and is up to date.

● Section II (Personnel Staffing).

Check:

1. Match MOS and authorization with job based on TOE or MTOE scrub.
2. ASI correct for job requirements.
3. Adequate personnel to accomplish mission.
4. Staffing in paragraphs match recap in number of personnel by MOS and grade.
5. Availability of personnel in unit or replacement system on E-date of MTOE to identify shortfall problems.

● Section III (Equipment Authorization).

Check:

1. Equipment authorized will allow for mission accomplishment. Scrub TOE

with MTOE to determine possible shortfall.

2. Equipment documented in correct paragraphs in MTOE.
3. Equipment is the correct item as defined in TOE.
4. Equipment is documented with correct line item number (LIN).
5. Equipment has correct ERC criteria.
6. Equipment description is understandable if not complete (cross check with SB 700-20).
7. ILO items are documented as authorized while item being replaced remains on document as required.
8. Exempt items, for readiness reporting purposes, have been identified in MACOM message or on MTOE remarks.
9. Equipment density in recap match numbers in paragraph.
10. Equipment currently available to unit will meet requirements of unit as documented or equipment can be requisitioned and filled prior to document's E-date.

ILO Actions at Unit Level

Upon completion of the MTOE review, the most common problem will normally be equipment availability or shortfall against MTOE authorization. If the MACOM has not provided guidance on ILO items in the message or on the MTOE, the following actions will be required:

- Determine shortfall by reviewing assets on hand against equipment authorization on the MTOE.
- Determine if equipment can or cannot be filled to required levels by requisition.
- If equipment can be issued, determine when it can reasonably be expected to arrive in the unit?

- If equipment cannot be issued, determine appropriate ILO item by consulting SB 700-20 and DA Pam 700-25.
- Determine availability and status of ILO items.
- Request MACOM to document ILO items
- in the MTOE until actual authorized equipment can be made available.
- Provide ILO guidance to subordinate units by message.
- Determine if the unit's capability will be significantly degraded by use of ILO items.

SECTION III. DOCUMENTS TO ASSIST IN REVIEW OF FORCE STRUCTURE AND DOCUMENTATION ACTIONS

In the past, review of documentation (TOE and MTOE) and force structure issues involved painful and time-consuming line-by-line "stubby pencil" drills. With the introduction of automated data processing, evaluation of documents is easier.

Data extracts can be obtained from the installation or MACOM with VFAS and ITAADS. When requesting information from these systems, direct coordination with the analyst assigned to the documentation position will assist in obtaining the data most useful in evaluating an issue. Prior to coordination, the analyst needs the following information to extract accurate data from the computer:

- An "as of" date when the data is to be run is critical. For example, an "as of" date prior to the unit's E-date will not provide data desired if the evaluation is to consider the unit after the E-date.
- The UIC and standard requirements code (SRC) of units to be extracted from the data base.
- The LIN and a description of the items of equipment to be extracted from the data base.
- Paragraph, MOS, or job description of personnel positions to be extracted from the data base.

Vertical Force Accounting System

The VFAS is produced by the MACOM to provide input into the HQDA FAS. It is useful as a planning document for force structure actions in subordinate units. It provides the following information:

- A list of unit actions by troop program sequence number (TPSN) and UIC.
- Type change, E-date, and old and new strength figures.
- Reason for change.

This data is useful both for information and as quality control for changes submitted on earlier actions. It is also a good starting point for review of force structure action prior to development of new issues.

Standardized Property Book System

The SPBS is used by the property book officer for authorization data of equipment in units. It is a derivative of TAADS. Due to staffing of TAADS within the MOC cycle, the following must be taken into consideration:

- Authorizations will not always reflect new MTOE data. The data must be checked against any new MTOE or ITAADS data.
- Authorization information will not be in an MTOE paragraph breakdown. The types of information the SPBS provides includes—
 - Hand receipt data.
 - Asset visibility by LIN.
 - Authorizations (cross-balanced with ITAADS).
 - Sensitive item listing.
 - Excess or shortage equipment listing.

If a staff action involves critical shortage items, it is also advisable, as a quality control check, to

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coordinate with units to determine equipment availability, in addition to using the SPBS data.

Installation, The Army Authorization Documents System

The ITAADS is the automated data processing system that provides standard management of TOEs and MTOEs at the installation. In addition to providing the capability to input new TOEs, post-MTOE changes, and produce MTOEs in the MOC cycle, the ITAADS provides management extracts that assist in evaluating documentation action. These extracts are called cycle runs with cycle VII and VIII providing the most useful data to units at corps level down.

- Cycle VII extracts data by MOS (for personnel) and LIN (for equipment) reflecting required and authorized levels by unit (UIC level). It provides a command summary and

produces a quick summary, by unit, of what is authorized for a given unit on the "as of" date requested for the data run.

- Cycle VIII compares one or more documents (TOE or MTOE) against other documents (TOE or MTOE). It is divided into four parts that depict differences between the documents. Part I is the header and tells which documents were compared. Part II reflects differences between documents including all multipliers. Part III reflects differences between documents but does not include multipliers. Part IV reflects net change-by-line between documents.

Cycle runs from ITAADS can assist in making a rapid comparison between an old MTOE and a new TOE or MTOE. This eliminates much of the detail work of line-by-line comparison of documents. It also allows for rapid identification of personnel and equipment issues.

SECTION IV. DOCUMENTATION MODERNIZATION

Documentation modernization is a management initiative, at HQDA level, designed to analyze, evaluate, and recommend courses of action to improve the Army documentation system. To resolve problems of instant unreadiness associated with modernization and to improve management of change, a three-initiative approach is being taken. These are—

- To stabilize the force.
- To standardize the force.
- To modernize the Army's management and documentation system.

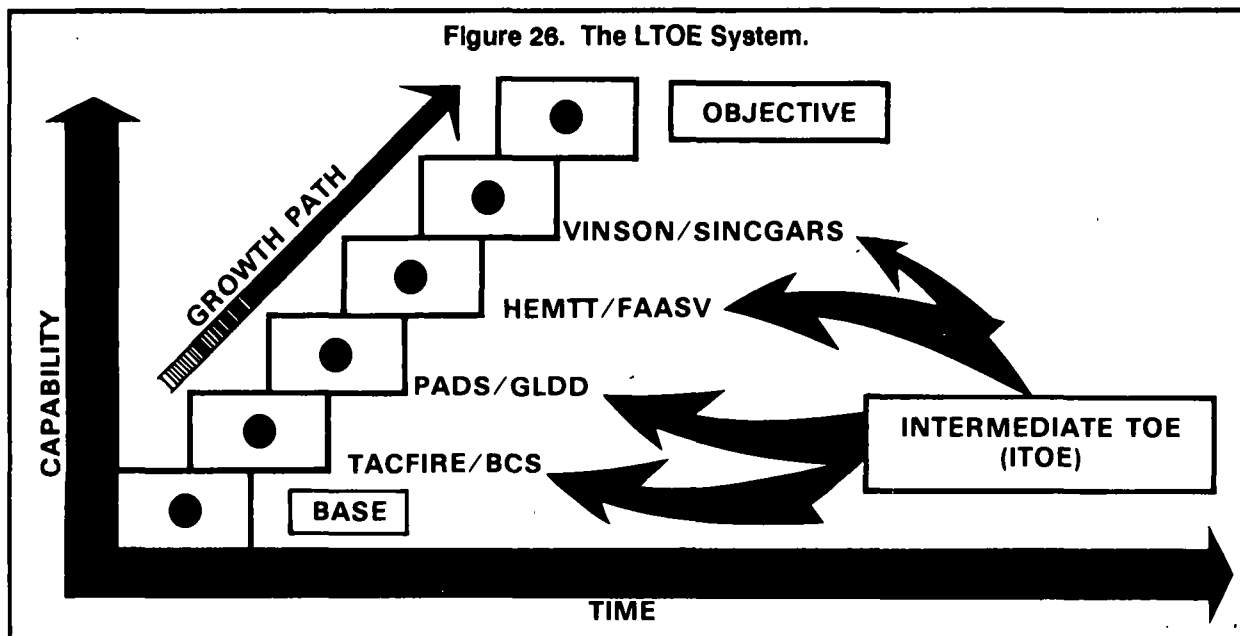
The primary objective in force stabilization is to reduce the level of change and turmoil. Documents, once produced as MTOEs, will not be changed unless approved by HQDA. Force standardization will be achieved by implementing the LTOE or standard installation TDA. Modernization of the Army's management and documentation system will be through state-of-the-art computer systems and improved computer programs.

These improvements will decrease the depth of involvement required under the current system of

documentation at division, corp, and MACOM levels. Documentation of unit structure and materiel changes will be made in the LTOE only after HQDA has fully resourced the change. The methodology in which the LTOE is constructed will allow forecasting changes and will greatly simplify the documentation process. The LTOE, combined with the new automated system, will allow commanders to focus that time currently spent in detailed review of MTOEs toward other efforts.

Living TOE System

Under the current system, changes are applied to the TOE from the BOIP. When the change is placed into the TOE, it applies to all units of the same type of SRC throughout the Army. Because changes are made up to two years prior to an organizational change or materiel fielding, problems of instant unreadiness with new MTOEs become an issue with units in the field. Changes under the LTOE are designed to correct this problem. The LTOE is a document that prescribes the organizational design, including personnel and equipment



requirements, of a type of unit that grows in capability with each incremental change (Figure 26).

The LTOE method of documentation offers commanders in the field the following advantages:

- The intermediate TOE (ITOE) is documented for a specific battalion as change occurs.
- Each ITOE change is totally resourced prior to preparation of an authorization document.
- Commanders report readiness against on-hand equipment and personnel.

The TOE begins with a doctrinally sound base case and provides a series of intermediate TOEs leading to a fully modernized objective design. The LTOE is the basis for force programming and becomes an authorization document when HQDA approves resources, specific unit designations, and E-dates for the activation or reorganization. The important elements of the LTOE include—

The base TOE. The base TOE is an organizational design founded on doctrine and equipment available. It is the lowest common denominator of modernization. It identifies the minimum essential wartime requirements for personnel and

equipment based on equipment common to all units of a given type organization.

The incremental change package (ICP). The ICP is a doctrinally sound grouping of personnel and equipment change documents that is applied to a base or intermediate TOE to form a new TOE variation.

The ITOE. The ITOE is an organizational design that results from applying one or more incremental change packages to a base TOE to produce an enhanced capability. These documents form a bridge between base and objective TOEs and provide the primary tool for programming, executing, standardizing, and documenting the force structure during phased modernization. Each ITOE is assigned a secondary ICP variation number. For applying resources in a constrained environment, the system allows selective application of BOIP to the ITOE.

The objective TOE. The objective TOE is a fully modernized, doctrinally sound organizational design that sets the goal for planning and programming at HQDA.

Headquarters, DA, through the Adjutant General's Office, periodically publishes an authenticated subset (by SRC) of a unit's LTOE (by SRC). It is formatted to portray mission-significant incremental TOE changes of a specific unit as it moves from the base TOE toward its objective

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TOE. In this manner changes are documented and managed down to battalion level by UIC as resources become available. Units can also predict the scope of change by consulting the LTOE for each incremental TOE change.

Table of Distribution and Allowances Modernization

Headquarters, DA, has developed TDA initiatives to dampen change and ensure supportability of required changes in the Army's TDA activities. Actions to stabilize, standardize, and modernize applies equally to TDA activities and MTOE units. A TDA system ensures improved supportability to TDA changes. Implementation of the manpower staffing standards system and standardization of installations and communities contributes to improved TDA management. Additional measures include the following actions:

- Incorporation of the TDA force structure into the force structuring process at HQDA, called the Total Army Analysis (AR 71-11).
- Reducing frequency of MOS, ASI, and officer skill changes.
- Issuing by HQDA of PBG at grade and MOS levels of detail.
- Developing a plan for converting appropriate TDA activities such as school brigades and battalions to MTOE units.

All TDA modernization initiatives continue to recognize the unique requirements of the various TDA activities. However, HQDA, through centralized management, provides guidance, resources, and a focal point in the TDA standardization process.

CHAPTER 9

Manning

Soldiers remain the ultimate weapon in warfare. Despite the ever-increasing technical sophistication and lethality of weapons, soldiers still determine when, where, and how those weapons are employed. It is this simple truth that makes division personnel planning and management activities so important. Never before have battlefield skills been so complex and demanding. Yet, at the same time, never before has the Army's ability to acquire and retain the soldiers it needs been so constrained. This situation has resulted in an increased need for training and specialization, with an accompanying requirement for better management. There is no longer "slack" in the personnel system. Where once an infantryman could be used in both mechanized and light infantry units, there are now two types of infantrymen—light and fighting vehicle—who are not necessarily interchangeable. Where any infantryman could once be assigned as a 90-millimeter, recoilless rifle gunner, now only specially trained and identified infantrymen are qualified to fire the Dragon antitank missile. Getting "the right person, in the right place, at the right time" has never been more important and, as such, is the essence of manning.

The division's role in manning is generally limited to the preparation for receipt and management of internal personnel resources. Up to the point where a soldier arrives at his assigned duty station the ability of the division to influence the process that recruited, trained, and assigned him is minimal at best. Decisions and actions concerning the quality, quantity, and distribution of soldiers are the responsibility of HQDA or its subordinate MACOMs. The division sits at the end of the manning pipeline and must manage with the results of those decisions and actions, whether good or bad. This is not to say that divisions have no means of redress when they are being adversely affected; it just means that someone else is at the controls of the pipeline. It is therefore up to those responsible for manning within the division to focus their efforts on making the best use of available soldier assets in support of the division.

SECTION I. RESPONSIBILITY

The division G1 is the point man in providing personnel support. He is responsible for establishing a personnel program that sustains the current structure and supports future organizational changes. That program must be based not only on current and future personnel needs but also on priorities associated with those needs. Without

priorities, there can be no logical method of sharing the inevitable personnel shortages that will occur. The program itself must be implemented through a management structure that is precise yet flexible enough to make midcourse adjustments as situations change. To establish such a program requires close coordination with other division staff sections.

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While the G1 is an expert on personnel management, he is not a force developer, trainer, or logistician. His ability to establish an effective personnel program is heavily dependent on his understanding of future force structure and new equipment initiatives. Without assistance from other staff experts, the only tools he has to determine future personnel requirements are SIDPERS and external communications with higher level personnel management activities. SIDPERS is the automated personnel management information system used by division personnel planners and managers. It contains information on personnel assets and personnel authorizations projected six months in the future. These future authorizations are of limited use in isolation.

Errors

The authorizations in SIDPERS may be wrong. Mistakes in documentation are not an uncommon occurrence and may not be readily apparent to a personnel manager. He requisitions and assigns soldiers based on authorizations. Unless errors are obvious, such as the use of an obsolete MOS, he has no basis for questioning the rational—especially when doctrinal issues are involved.

Reality

True personnel needs are not necessarily depicted by those future authorizations. Those authorizations are based on the E-date of the authorization document. That date depicts when all personnel and equipment should be on hand for the unit to be effective. It does not take into account preliminary training requirements, such as NET, which requires those personnel to be available well before the E-date. It does not display the incremental personnel adjustments needed to smoothly implement a major organizational restructuring.

To ensure that personnel plans are based on true personnel needs, the G1 must coordinate

closely with other staff elements and commanders. He must be an active participant in any forum that impacts on future personnel authorizations and needs. That can readily be accomplished through the organizational approaches Chapter 5 discusses.

The G1, with all his other responsibilities, cannot personally maintain the continuous day-to-day communication and coordination necessary to keep abreast of true personnel needs. This is accomplished by assigning that responsibility to members of his internal staff. It can either be a full-time duty or additional duty depending on the volume of expected change. This staff POC is the G1's long-range personnel planner. He is an expert on the personnel needs associated with implementing new equipment and force structure actions. He serves as the personnel expert at all action-officer-level force integration planning meetings. Establishing such a POC enhances horizontal staff communication.

The G1 must also keep his lines of communication open to subordinate units and staffs. The entire personnel planning and management process works best when subordinate units participate in developing plans and understand why plans are developed. They must be kept informed of changes that will influence their personnel status. For example, the introduction of a new item of equipment may require that personnel fill for certain critical skills in fielding units be increased during NET above the division average. Those units who also require the same personnel and are not involved in fielding must be prepared to experience shortages at times during the fielding effort.

Given the G1's personnel planning responsibilities, a commensurate responsibility rests with the other division staff elements, especially the force integration staff. They must keep the G1 informed of future actions that may impact on personnel. They must include the G1 in all planning activities to ensure personnel considerations are properly addressed. The G1 and G3 must coordinate school quotas required to support force modernization.

SECTION II. PLANNING CONSIDERATIONS

Planning personnel support for a division requires a long-range focus. Abrupt changes in assignment or other unexpected personnel actions can have a negative effect on soldiers, which

degrades job performance. These actions can usually be avoided if the G1 knows what changes the future holds and uses an incremental approach to get from here to there. This means that he must

become involved early on in the staffing of doctrinal, organizational, and equipment changes. He must be privy to those documents that establish personnel needs, including the—

- **TOE.** Review of a TOE provides a preview of expected personnel changes. It is the warning order for an organizational change that can be the result of a change in doctrine, equipment, or even personnel policy.
- **MTOE.** An MTOE indicates what the actual personnel change is to be as of its E-date. It tells what soldiers an organization is authorized and is the authority for requisitioning those soldiers.
- **MFP.** An MFP outlines the personnel needs associated with the fielding of a new item of equipment. It identifies new MOSs, training requirements, and support requirements. It is not an authority to requisition people. It should be used to cross-check TOE or MTOE information. Chapter 10 discusses the MFP in more detail.

An important factor in determining future personnel needs and then requisitioning people to meet those needs is understanding the system used to match the personnel needs of an organization with actual people. Personnel positions in an organization, as captured in a TOE, MTOE, or TDA, are identified by a nine-character specialty code that identifies the soldier skills and grades needed to fill those positions. Skills and grades are those deemed essential for successfully performing the duties associated with each position. There are separate codes for officers, warrant officers, and enlisted personnel.

The most commonly used code is the military occupational specialty code (MOSC) for enlisted personnel. An understanding of how this code is used generally explains the use of all three. The MOSC consists of five elements:

1. **MOS.** The first three characters of the code represents a group of duty positions that require closely related skills; that is, MOS 11M—Fighting Vehicle Infantryman.
2. **Skill level (SL).** The fourth character of the code identifies skills, proficiency, and abilities

required for successful performance at a given grade; that is, SL2 for a sergeant, grade E5.

3. **Special qualification identifier (SQI).** The fifth character of the code identifies special skills and qualifications common to many positions; that is, SQI G—Ranger.

4. **ASI.** The sixth and seventh characters of the code identify special skills and qualifications in addition to, but closely related to, MOS requirements; that is, ASI C2—Dragon gunner. Additional skill training is highly specialized. It is critical that personnel be assigned by their ASI.

5. **Language identifier code (LIC).** The last two characters of the code identify proficiency in a foreign language; that is, LIC KP—Korean. A position identified as 11M2GC2KP shows the need for a fighting vehicle infantryman, in the grade of E5, trained as a Ranger and Dragon gunner, with a proficiency in the Korean language. This same code is used to identify a soldier's individual qualifications and thus serves as the link between personnel needs and the soldiers who can fill them. A personnel planner must become especially familiar with those MOSs and ASIs that relate to new equipment. He must be able to identify and track the people possessing those skills within the division's personnel inventory because of their critical role in operating, maintaining, and sustaining new equipment that is often complex, high-technology hardware.

Just knowing what future needs will be does not allow the G1 to complete his plans. He must also know where the needs are and when they will occur. This is critical when the units of a division are stationed at several locations, as in USAREUR. A soldier wrongly assigned to one unit cannot easily be moved when substantial transportation costs are involved in moving him to another unit and location. Also, a soldier may be correctly assigned, but to a unit that will inactivate during the year. If his skill cannot be used in another unit at the same location, he is then malassigned. Movement to another location will again have a substantial cost.

In planning to meet future personnel needs, the G1 must consider such consequences. He should attempt in his planning to incrementally draw down the personnel strengths of inactivating units through normal reassignment actions to minimize this problem. In cases where people arrive before their skills are required, they may be temporarily

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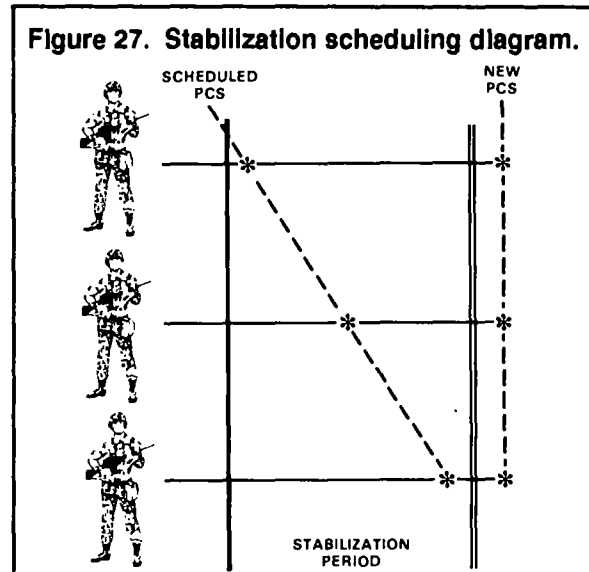
assigned to a holding unit rather than be permanently improperly assigned elsewhere. This is necessary when a new unit is activating. The unit does not officially exist until its E-date. Prior to this, a "carrier" unit is created to which soldiers are assigned.

Once assignments have been made they also have an impact on future management of personnel strength levels. If a unit is formed completely from new arrivals, it will, given a standard tour for most soldiers, self-destruct when those soldiers become eligible for reassignment at the same time in the future. In order to avoid this, the GI should attempt, if possible, to create a new unit from both new arrivals and soldiers transferred from other units within the division. Future personnel losses will then be staggered over time and can be managed on a routine, rather than crisis, basis.

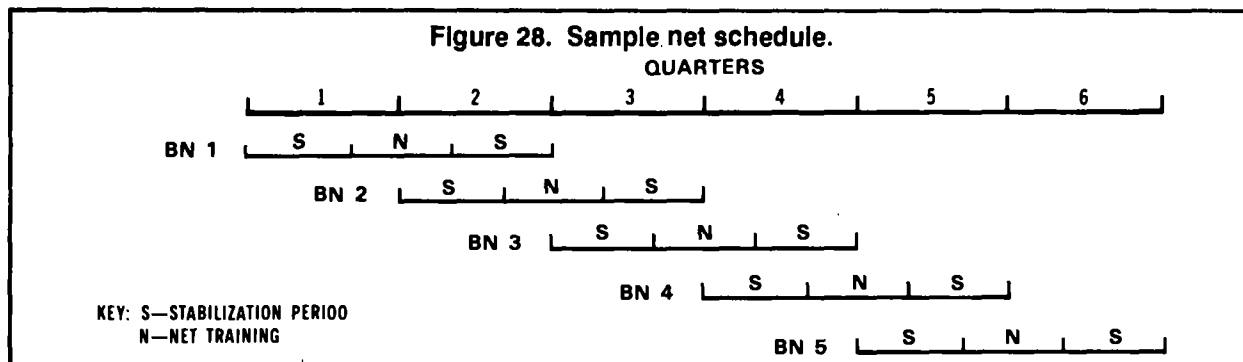
The stabilization of personnel in units involved in new equipment fielding activities has strength management impacts. The possibility exists that when the stabilization period ends, all soldiers with previously staggered reassignment dates may be immediately available. This can cause readiness problems, most frequently with key personnel who extend in order to help the unit during a difficult transition period. They often depart en masse, leaving a staggering knowledge gap (Figure 27).

Stabilization, along with certain personnel fill policies, can have even farther reaching effects. During the fielding of a major item of equipment, it is a common policy to stabilize unit personnel beginning 60 days prior to the start of fielding and ending 60 days after fielding is complete. During this period, it is also common to fill certain MOSs to 100 percent of authorized personnel. Many times, this MOS fill is well above the division average and must be done with internal assets. If

multiple battalions are involved, this means that those battalions last fielding the equipment must pay the personnel bill for the battalions fielding first. This problem can worsen if stabilization windows overlap.



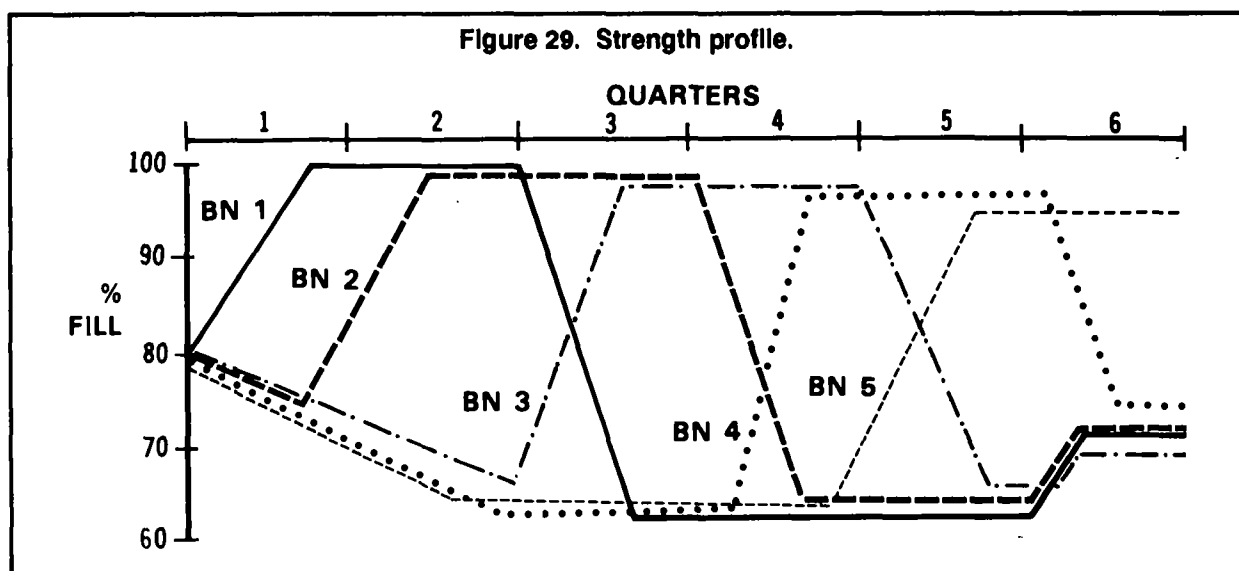
(Example: A division is scheduled to field the M1 tank. It has five tank battalions. The NET strategy dictates that a battalion transition each quarter with the actual fielding process taking eight weeks. The standard "60 days prior, 60 days after" NET stabilization policy is in effect. A personnel fill policy is also in effect for that period stating that MOS 19E (tank crewman) will be filled to 100 percent in transitioning units. The average division fill for MOS 19E is 80 percent. Figure 28 is a graphic representation of the NET schedule. The combined result of these policies is that at times during the NET process, two battalions may be in



the stabilization and 100-percent fill window. This causes the other three battalions to drop to around 66-percent fill of 19Es and thus degrades readiness (Figure 29).)

The G1 must be aware of these consequences and plan to deal with them. His recommendations

to the commander and advice to force integrations planners must warn of these dangers. The use of stabilization and fill guidance is important to the fielding process and cannot be eliminated. It should, however, be tempered with the interests of the entire division in mind.



SECTION III. IMPLEMENTATION AND SUSTAINMENT

The actual implementation of established personnel plans must be precise yet flexible. It begins by properly identifying the personnel assets needed to implement the plan. This includes both on-hand personnel and incoming personnel.

Incoming personnel must be carefully screened, to identify their skill qualifications (MOS, SQI, ASI), and then properly placed to make the best use of their qualifications. Because of the specialization requirements associated with new equipment and structures it is necessary to manage personnel down to the ASI level of detail.

Although SIDPERS provides ASI-level detail, personnel managers do not always manage at that level. There are several reasons for this systemic breakdown. One reason is a lack of understanding on the part of personnel managers of the importance of ASI management. Another is the misinterpretation of priorities set by the chain of command. For example, a battalion may be designated as top priority of fill for tank mechanics.

The next tank mechanic arriving at the division is assigned by MOS even though he has an ASI for another tank system. Management at ASI levels is the key to successful personnel support for force modernization.

During implementation, numerous follow-up checks must be made to ensure all is proceeding according to the following established or emerging requirements:

- **SIDPERS input.** Action codes entered into SIDPERS to accomplish a certain purpose must be reviewed at a later date to ensure they have worked. This includes stabilization actions as well as MOS reclassification.
- **Strength levels.** Strength levels must be continually monitored to ensure they follow established guidelines. If replacements do not arrive on time, or losses exceed expected levels, adjustments must be made according to the priorities originally established.

SECTION IV. IMPACT OF THE UNIT REPLACEMENT SYSTEM

The Unit Replacement System is the management process by which soldiers and their leaders are stabilized in small units that are formed, trained, and in some cases, deployed to meet manpower and operational requirements. The existing Individual Replacement System will continue to operate in conjunction with the Unit Replacement System; therefore, personnel managers must be familiar with both systems.

Under the Cohesion, Operational Readiness Training (COHORT) unit replacement system the primary replacement unit is the company. In the COHORT concept, first-term enlistees are recruited for a specific COHORT unit and undergo IET together. They then proceed to a FORSCOM unit where they are joined with a cadre to form a

stabilized unit that will train together and deploy overseas on a fixed schedule. There are variations of the basic model for specific OCONUS assignments and for nondeploying units. Platoon and below replacement systems are also being used.

There are several unique personnel management considerations associated with the COHORT program. Some areas of special concern are selection of cadre personnel, impact on non-COHORT units, reassignment of personnel upon termination of the COHORT unit, and deployment procedures. Army Regulation 600-83 discusses the program in detail and personnel managers must be familiar with it in order to manage the COHORT program along with other force modernization initiatives at division level.

CHAPTER 10

Equipping

Fielding new equipment in Army organizations is a multidimensional process that can encompass all the force integration variables of doctrine, force structure, manning, resources, training, plans, and sustainment.

The successful integration of new equipment at the division level depends on the scope and complexity of modernization at the gaining command level. It also requires an understanding of the Army's materiel acquisition process and materiel fielding planning process as well as the gaining units' roles in these processes. Also important to successful integration is applying the "total systems fielding" concept during planning and execution, optimizing the organizational and management approach for synchronization of all modernization activities, and using the numerous modernization information documents and processes effectively. Equally important is the assimilation of new equipment into a multiechelon combined arms training program.

New equipment fielding is a dynamic and complex process when taken as a subset of all other modernization activities. The issue for gaining units is the ultimate supportability of this materiel. Equipping programs are accomplished as part of synchronization of long-range planning and effective coordination. Execution of these programs through application of organizational force integration mechanisms, available information, and expertise will have an optimal effect on unit readiness.

SECTION I. TOTAL SYSTEMS FIELDING CONCEPT

The concept of "total systems fielding" involves managing new equipment fielding from all aspects of necessary operational support as each system is fielded. At the organizational level, or receiving end, of the modernization effort, this concept is essential to the success of the equipment integration management process. There are two Armywide systems which facilitate the total systems concept—Integrated System Support (ISS) and total package fielding (TPF).

Integrated System Support

Integrated System Support is an Army management system which integrates all relevant factors associated with new materiel fielding into the

modernization management process. The objective of ISS is to facilitate the modernization effort that is totally supportable and executable before, during, and after fielding. This management system supports the total systems concept by focusing management efforts on fully equipped units rather than individual equipment systems. The scope of ISS is greater than that of ILS, the backbone of materiel acquisition and development management. Figure 30 lists the elements that are the basis for ISS.

Integrated System Support Management

The ISS is also used as a basis for assessing modernization programs from the DA staff to the

Figure 30. ISS elements.

*Design influence	*Standardization/ interoperability
*Supply	
*Maintenance	*Training
*Support equipment	*Training devices
*Test equipment	Doctrine
*Manpower	Distribution
*Personnel	Redistribution
*Technical data	Resources (POM)
*Computer resource support	Resources (budget)
	Resources (execution)
*Packaging	Documentation
*Facilities	Force structure
*Transportation	Command and Control

NOTE: The asterisks denote those elements that are also ILS elements according to AR 700-127.

unit level. When supplemented with sufficient detail, ISS elements are the basis for a required, thorough review using the total systems approach. Headquarters, DA, staff agencies use ISS to facilitate program reviews during functional area assessments (FAA). These assessments are broad-based, DA-level reviews designed to assess the Army's force integration effort and to integrate the efforts of the Army and MACOM staffs. The ISS model is used within the FAA process to evaluate key organizations with their related personnel and materiel within a branch of the total Army. Each FAA identifies both specific and systemic issues and actions that must be resolved to ensure total systems fielding. Corps level staffs and below use ISS to facilitate comprehensive assessments of equipment integration programs. By using the Total Systems Fielding Assessment List (Appendix A), staffs and agencies can develop a more detailed list that will

suit the requirements of their installation, situation, or level of organization.

The ISS can be used as—

- A staffing aid for review of modernization information documents (for example, AMIM, MFP).
- A training aid for systems or functional managers in staff or unit.
- A guide for publication of various unit information products (for example, LOI or FI unit updates).

Total Package Fielding Concept

The current surge of equipment modernization efforts has contributed to many lessons learned for materiel developers, combat and training developers, and units. Many of these lessons have resulted in changes to policy, regulations, and strategies in the way modernization is conducted. One such initiative, TPF, was developed and tested by the US Army Materiel Command (USAMC) to improve the fielding process. The Army's goal is to have TPF become the standard fielding process.

Under TPF, the materiel fielder assumes additional responsibilities to relieve the gaining MACOMs and their subordinate units of much of the logistics burden previously associated with the materiel fielding process. The materiel fielder develops, plans, and procures the materiel system. In addition, the materiel fielder requisitions the system and all its support, coordinates the Materiel Requirements List (MRL) with the gaining MACOM, consolidates and packages by unit level, delivers, performs a joint inventory at handoff, provides documentation for all materiel, and assures that it is posted to unit records.

Total package fielding requires different levels of effort for both the fielding and gaining commands depending on the category of total package fielding. Two factors are consistent throughout all categories—the fielding command programs funds for materiel to be issued under the total package fielding concept, and the fielding command requisitions materiel for issue. Total package fielding includes concurrent handoff of the primary materiel system and its support package, which includes but is not limited to—

- The primary system, including all component major items and associated basic issue items (BII).
- ASIOE and associated BII.
- Special tools and test equipment (STTE).
- TMDE, including automatic test equipment (ATE) and test program sets (TPS) and interconnecting devices.
- Any authorized initial issue spare and repair parts.
- Special mission kits or equipment (for example, blackout kits, arctic kits).
- Starter set of technical publications.

Under TFP, the materiel fielder requisitions, packages by unit level, and marshalls all materiel for the fielding process except bulk petroleum products and chemicals (Class III), conventional ammunition (Class V), COMSEC materiel, and medical materiel (Class VIII). The gaining MACOM requisitions these classes of materiel. However, they are separately and clearly listed as a requirement on the total MRL. The materiel fielder also coordinates them with the gaining MACOM and the appropriate commodity manager to ascertain if these items will be available at time of handoff. If items will not be available at handoff, coordination will determine whether the end item or weapon system fielding will be delayed. The TPF for unit activations will include all items listed above plus—

- Authorized organizational support equipment (OSE) with required support packages.
- Deployable CTA equipment (CTA 50-909) and required support packages.

The TPF for unit conversions directed by DA includes these items plus the difference between the old and new series MTOE authorization.

Total package fielding will not be required for fielding involving—

- End items with different national stock numbers (NSN) but the same LINs being fielded to fill a replenishment requirement or plus-ups. End items with a 25 percent or greater change in components, ASIOE, spare or repair parts will be fielded by the TPF method.

- Modification work orders (MWO) and kits for systems currently on hand in a field unit.
- Product improvement programs (PIP), except extensive reconfigurations with 25 percent or more change in components and spares.
- CTA or discretionary items, except for deployable CTA as CTA 50-909 outlines.
- War reserves and non-POMCUS operational projects initial stockage of war reserves during support of TPF.

The actions needed to accomplish TPF will vary based on the complexity of the system fielding. Six distinct categories are recognized with varying levels of effort required to assure gaining unit satisfaction. Army Regulation 700-142 outlines these six categories. In general, the success of TPF for the unit requires the following actions:

- In coordination with the MACOM staff, assuring that MTOE authorization documents are established in time to ensure that a valid, complete, and coordinated total materiel requirements list can be computed.
- Programming, budgeting, and requisitioning all bulk petroleum and chemicals (Class III), Class V, and Class VIII materiel needed to support the system fielding.
- Submitting publications requisitions (DA Form 4569) to receive new or additional publications and updating the DA Form 12 series to ensure receipt of all changes and revisions to the publications.
- Providing the required personnel, materiel, facilities, and tools to assist in deprocessing and handoff as agreed to in the MFP or MFA and prefielding coordination meetings.
- Performing unit-level deprocessing of materiel such as cleaning, unit marking, and operator checks and maintenance.
- Signing joint inventory forms and posting necessary receipts and other accounting documentation at all appropriate levels.
- Filling out and turning in, through all appropriate channels, DA Form 2410-R, Availability of Logistics Support Elements, and appropriate discrepancy reports or warranty claims.

SECTION II. PLANNING

The success of actions that are accomplished during the planning phase are essential to the total systems integration of new equipment. Planning for numerous equipment fieldings must be synchronized with the other modernization activities associated with structuring, resourcing, manning, and training. This synchronization requirement underscores the value of the entire management of change approach by the organization.

System Identification

Planning for equipment fielding begins as much as seven or more years in advance. Designated FUE units (or units being distributed as non-developmental, off-the-shelf, or otherwise accelerated, program items) may have to accept a shorter planning period. Whether optional or not, the first task would be to identify what equipment systems are programmed and when they will be fielded. The Army's distribution information source for modernization items is TAEDP. Once a year the distribution plan for new systems is developed or updated by the Army staff (ODCSOPS), entered into the TAEDP, and distributed as a TAEDP product to each MACOM. Each MACOM develops its internal distribution plan and disseminates it via various electronic, hardcopy, or software means to each installation and major subordinate command or both. The plans will normally reflect distribution to the UIC level of detail.

Assess System Impact

Proper planning for the integration of new equipment is based on a thorough understanding of the system, its operational training, and support requirements. Materiel fielding and gaining organizations use the total systems fielding concept as the basis for fielding activities. This provides a framework for information gathering, analysis, and planning. Assessment lists, such as the ISS-based Total Systems Fielding Assessment List (Appendix A), or derivative lists developed for the specific needs of the installation or organization, are used to review various information documents such as AMIMs and Draft Materiel Fielding Plans (DMFP).

Early in the fielding program, information may not have been developed in enough detail for thorough planning. The only information available would be in the Abbreviated Form (AF) section of the AMIM. Until maturation of available information in AMIM, FSP, or MFP, use of BOIPs, O&O plans, and revised TOEs may provide general planning information. These assessments facilitate the development of new personnel, equipment, supply, training, facilities, and funds requirements. It also includes identification of supportability shortcomings that the materiel developer, training developer, and the MACOM or Army staff must resolve as fielding activities progress. In summary, the total systems approach, use of comprehensive assessment tools, information acquisition, and analysis are essential to the gaining command's planning effectiveness.

Develop Resource Program

Following thorough assessments and identification of new or additional resource needs, units develop their requests for resources to support their modernization programs. Requests for specific installation or subordinate command requirements (such as site activation, new equipment training support, military construction, and repair of displaced equipment) are forwarded to the MACOM. They are then submitted as part of the MACOM Program Analysis and Resource Review (PARR). Headquarters, DA, then develops and programs standard costs associated with new equipment applicable to all MACOMs, such as repair parts, POL, and first-destination transportation. As units review materiel systems programs, they either develop those unique requirements as stated or assist the MACOM in validating top-down developed cost factors that HQDA provides.

Develop Milestones

Based on the review and assessment process, the force integration staff identifies the varied technical systems with which the organization will interface. The staff also identifies the mechanical tasks required to effect timely documentation, manning, equipping, training, management, and programming. To lay these requirements out in a logical,

sequential, and timely manner requires the development of milestone lists or models. The models are then used as management tools by all players. The value of milestone models is in their use as control mechanisms.

Task identification. Once relevant tasks are identified for new equipment items, milestone models facilitate rapid dissemination of information to all concerned players. Everyone knows what tasks need to be accomplished to effect successful fielding.

Tracking. Models assist force integration participants in keeping track of required actions. This facilitates a coordinated command effort at meeting fielding milestones.

Cueing. Models facilitate a cueing system for managers who have responsibility for force integration actions. Cueing is a key function in the control of execution.

Information. Models are helpful in the necessary and timely flow of information. Information facilitates visibility of new equipment and force integration activities and chain of command involvement.

Individual system experts, functional staff personnel, and/or the force integration staff initially develop the milestones that will apply to each system. Once a data base is established, the management of models is supported by administrative equipment, such as word or data processors, which retains and manipulates large volumes of information. This process results in a comprehensive list, from A to Z, of all the tasks the unit requires to introduce and sustain each piece of equipment and its associated doctrinal, personnel, force structure, resourcing, and training actions. Appendix B contains an example of a comprehensive list for an intensively managed system (IMS).

Materiel Fielding Milestones

The MFP was previously identified as a document essential to the gaining command's requirements for new equipment processing, deployment, and sustainment planning. The MFP's value as a planning document is directly related to the gaining command's role in its development, staffing, and publication.

The MFP milestones, plus those associated with fielding activities under the TPF program,

comprise the majority of actions that gaining units must manage for each system's introduction. The formal materiel fielding process spans two phases of the system's life cycle. Early planning takes place in the full-scale development phase leading to a production contract award (PCA). Milestones applicable to requirements before PCA are based on the scheduled PCA date for the system. As such, these milestones will be the same for all Army units. Those milestones applicable after PCA are based on the established first-unit-equipped date (FUED) for the MACOM or hand-off date for follow-on fieldings. Materiel fielding milestones are based on the type of acquisition program in effect for each system, either the traditional developmental program or the accelerated (nondevelopmental) program. The accelerated materiel fielding process is accomplished within a compressed milestone schedule. Figure 31 lists the materiel fielding milestones (see pages 86 through 88).

Materiel Fielding Plan Coordination

The coordination between the fielding command and gaining command, as it relates to the publication of a final MFP, is instrumental in the commitment by all agencies to user needs and satisfaction. The MFP and MFA document the materiel fielding commitment. From the gaining command perspective, the quality of the final MFP is related to the thoroughness of the coordination and review process.

Units below the MACOM level must be active participants throughout the MFP staffing process. They must ensure that all required information is provided, that gaining command responsibilities are fully understood and agreed on, and that the fielding command fully supports mutually coordinated fielding requirements.

Gaining units, and interested subordinate agencies, units, and individuals, must thoroughly review each iteration of draft MFPs according to internal management procedures. Reviews are accomplished by routine staff routing or special group MFP scrubs to develop comprehensive, coordinated comments for input to the MACOM and the fielding command. The unit must develop and use detailed checklists (such as the ISS checklist) that facilitate total systems fielding criteria or other tools, such as the DA pamphlet containing MFP preparation instructions, to accomplish reviews.

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To ensure fielding and coordination agencies are responsive to the needs that have been articulated in the MFP staffing process, units must be provided with copies of applicable correspondence. They must actively follow-up to ensure that either corrective action has been taken or unresolved issues are being addressed by the appropriate action agency (MACOM, TRADOC, AMC, HQDA). The result of the MFP process is a document that stands alone in its usefulness as a planning tool.

Mission Support Plan Coordination

Another important aspect of the materiel fielding process is the preparation of the MSP. Since the MSP is used by the fielding command to compute the initial issue quantities of support materiel at each support level in the gaining command, its preparation and subsequent accuracy has a direct relationship to materiel sustainability at fielding. The gaining command, with input from subordinate installations and organizations, prepares and submits the MSP. As the fielding process progresses, the MSP is continually updated until its finalization about a year prior to FUE.

In preparing the MSP, responsible agencies must consider unique support requirements caused by—

- The differences in mission, location, and separation between operational and support units.
- The programmed force structure of DS and GS units (both AC and RC).
- Contingency, mobilization, war reserve policies, and requirements.
- All related ASIOE for the supported item based on data in the MFP and other planning documents (AMIM, BOIP).

Gaining organizations continually revise the MSP as distribution plans for the end item change, or when associated support item requirements are modified or added.

Materiel Requirements List Review

Using the MSP, MFP, and applicable authorization documents, the fielding command prepares a

consolidated MRL. The MRL becomes a part of the coordination package which identifies the authorized requirements for—

- End items or weapon systems.
- Associated support items of equipment.
- Organizational support equipment (for unit activations).
- Authorized stockage list (ASL) and prescribed load list (PLL).
- STTE.
- TMDE.
- Special mission kits or equipment.
- Technical publications.
- Communications security equipment.
- Deployable CTA items (for unit activations).

The MRL also identifies all requirements for ammunition, bulk POL, and medical supplies, even though specially controlled commodities like these are not included in the package. The fielding command also furnishes a list of items that are not readily available in the supply system or that require redistribution or accelerated issue to be on hand for the fielding.

The gaining command, coordinating with applicable subordinate installations and major subordinate commands, reviews the MRL and related coordination documentation. The review should consider—

- Requisitioning responsibilities for both the fielding and gaining command.
- Verification of the availability of supplies that must be obtained by the gaining command.
- Verification of the support package items currently stocked that should not be furnished as a part of the materiel package.

The "scrub" of repair parts lists in particular should validate requirements for additional storage, elimination of common items already stocked, and long-term sustainment.

SECTION III. EXECUTION

Activities in the execution phase of the equipment fielding process for the gaining organizations are focused on—

- Equipment displacement or redistribution activities.
- Joint supportability assessment procedures.
- Hand-off procedures.
- Conducting NET.

Displacement or Redistribution

Planning and coordinating for the displacement or redistribution of replaced items must be as detailed and thorough as that done for the receipt of new equipment. Proper resourcing and planning for these items is initially dependent on the decisions by HQDA and/or the NICP and MACOM as to their disposition. Demands within the major unit, other units in corps or MACOM, depot maintenance requirements, RC shortages, foreign military sales programs, war reserve stockage requirements, or disposals entail varying degrees of effort on the part of the units giving up these assets.

The MACOM headquarters, corps, and division staffs must energize the item management process early by providing timely, coordinated guidance to units. This allows units to allocate the time, manpower, and dollars necessary to execute turn-ins or redistribution. Disposition instructions and turn-in or redistribution criteria are established and disseminated to the level responsible for execution. Finally, a unit redistribution strategy should avoid techniques that disrupt training or have an adverse impact on readiness.

Joint Supportability Assessment Procedures

A key coordination event for the gaining unit before the actual handoff of new items is an assessment of the availability of the support package being assembled at a packaging point in CONUS. The fielding command provides the assessment of the total package via a request for call forward. Based on the request, the gaining command, in coordination with recipient units, determines if conditions are acceptable.

Call forward information assists the gaining command in determining system supportability regarding—

- End items.
- ASIOE.
- STTE and TMDE.
- Technical publications.
- ASL and PLL.

Information requirements for the call forward process are—

- Percent of fill for essential items.
- Overall percent of fill for the ASL and PLL.
- Number of Classes II and VII lines in the package.
- Backorder status.
- Location of the staging area for shipment.
- Verification of retail system for customer documentation.

Based on access to the Logistics Intelligence File (LIF) and review of call-forward correspondence (normally a message), gaining units determine whether the new item is supportable and should be accepted. Concurrence of the request by the gaining command is the authorization necessary for the fielding command to ship the materiel.

Hand-Off Procedures

After the completion of materiel consolidation and movement of the total package to CONUS and OCONUS staging points, hand-off procedures begin. This phase includes the joint inventory conducted by the materiel fielder's hand-off team and designated representatives of the gaining command. Arrangements for the inventory and actual handoff are the joint responsibilities of the fielding command, the hand-off team, and representatives of the gaining MACOM.

The actual inventory of Class IX repair parts, TMs, and special tools consists of opening boxes, removing packages, and comparing status reports in the customer's documentation package. There is

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also a physical inventory of individual packages to verify contents. Requisitioning close-out documentation begins and TMs are inspected to assure that sets are complete and correct for the level of support for which the package is intended. Each Class II and VII item is inventoried to include BII and major components.

The inventory is complete when the gaining command has accounted for all items and when all

required discrepancy reports have been initiated. The gaining command aids accountability through the inventory process and the documentation of missing or damaged items. Once the equipment package has been accepted, continuous follow-up with the fielding command ensures the provisioning of back-fill items. Once the initial provisioning is complete, the unit closes the loop with higher headquarters and the materiel fielding agency.

Figure 31. Materiel System Key Fielding Milestones.

Code	Title
CD	Combat Developer
GC	Gaining Command
FC	Fielding Command
SC	Supporting Command (wholesale managers NICP, providing end items and/or support items to a fielding command)

Time to PCA

Event

240 days (8 mos)	— FC sends LON and initial draft MFP to GC — CD validates/updates BOIP/TDA/TOE
190 days (6-1/3 mos)	— GC replies to LON, provides POCs and comments on proposed subsequent milestones
120 days (4 mos)	— GC provides initial MFP comments to FC and provides proposed MSP — GC provides instructions for subsequent staffing
60 days (2 mos)	— FC makes appropriate adjustments to the production contract
0 days (0 mos)	— FC awards production contract

Time to FUED/Handoff

Event

510 days (17 mos)	— FC provides GC updated draft MFP and current distribution plan
420 days (14 mos)	— GC provides FC MFP comments and current MSP — FC establishes and provides project codes to LCA and UMFPs
380 days (12-2/3 mos)	— FC provides final draft MFP, current distribution plan, and MFA (for signature) to GC

Figure 31. Materiel System Key Fielding Milestones--(continued).

Time to FUED/Handoff	Event
360 days (12 mos)	— FC establishes follow-on fielding/hand-off milestones in AMMS
*340 days (11-1/3 mos)	— GC provides final MSP and signed MFA to FC — GC publishes updated MTOE/TDA and agrees on end items required
310 days (3-1/3 mos)	— FC verifies end item requirements and requests initial support lists from SC (ERPSL or SLAC) — FC establishes FRET header records
280 days (9-1/3 mos)	— SC provides initial support lists
250 days (8-1/3 mos)	— FC completes FRET data base — FC provides final MFP, approved MFA, and coordinates total MRL
240 days (8 mos)	— GC reviews total MRL, MFP, and MFA
210 days (7 mos)	— FC and GC conduct MRL coordination meeting
190 days (6-1/3 mos)	— GC indicates which MRL items are already stocked and not needed — MRL coordination is completed and MSP verified
180 days (6 mos)	— FC prepares FRET for requisition, provides MRL to LCA and UMFPs, and requisitions MRL
150 days (5 mos)	— GC requisitions bulk Class III, Class V, and Class VIII items — LCA provides status reports — FC provides Class II and VII document numbers to GC
90 days (3 mos)	— FC and GC make system assessment, joint supportability assessment for OCONUS — Handoff scheduled
85 days (2-5/6 mos)	— OCONUS shipping directives (surface) received at UMF.

*NOTE: Failure to meet this milestone will cause proportionate slippage in the FUED/hand-off date.

Figure 31. Materiel System Key Fielding Milestones--(continued).

Time to FUED/Handoff	Event
60 days (2 mos)	— FC and GC joint supportability assessment for CONUS — Handoff scheduled
55 days (1-5/6 mos)	— OCONUS shipping directive (air) received at UMFP — CONUS shipping directive (surface) received at UMFP
30 days (1 mo)	— Final supportability assessment — All materiel at staging site — Customer documentation verified — Final coordination for inventory and handoff — Deprocessing begins
0 days (0 mos)	— FUED (hand-off date) — FC/GC joint inventory handoff — GC documentation posted — FC/GC DA 361s, 364s, 368s — FC IOUs — FC/GC sign inventory report
+30 days (1 mo) past FUED (handoff)	— GC units submit 2410-Rs for fielding assessment to their MACOM HQ, LEA, MRSA, and FC — FC MFT after action report and draft lessons learned to MATDEV HQ and MRSA

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Resourcing

Financial and facilities resource constraints limit what can be done for force integration at any given time. Early identification of resource issues can prevent a lack of critical resources during the force integration process. In order to properly identify resource requirements, staff officers and managers at all levels must be involved in the process. Expert financial managers and facility engineers provide detailed staff work on projects; staff officers must be able to justify resources in order to provide effective and timely input.

SECTION I. FINANCIAL PROGRAMMING AND MANAGEMENT

Effective resource management in support of force integration initiatives requires a fully coordinated effort by division and installation personnel. Programming and subsequent management of allocated funds involve unique activities within the framework of the existing PPBES. The acquisition and control of force integration-related funds necessitates processes within organizations that effectively identify and document requirements during the programming phase. Financial management focuses on closely monitored use of allocated force integration dollars to maximize sustainability in using organizations.

Key Players

Traditionally, the roles of personnel at division and installation levels have been greatest during the budgeting and execution phases. With the advent of modernization, the Army requires a greater role for user organizations to assist in determining resource requirements in the formulation of the POM. Some important participants are—

Commanders. Commanders are responsible for developing, justifying, presenting, and defending

budget programs supporting their assigned responsibilities. They bear the bulk of the responsibility for ensuring that approved budget programs are properly executed. Commanders must ensure that force integration issues and requirements are given high priority within the units' decision-making process.

Primary and special staff. Installation and divisional primary and special staffs participate in resources activities by keeping abreast of force integration actions and by continually assessing related resource implications within their functional areas. They identify areas and recommend actions for decision makers when additional resources are required. As programs are implemented, they do a follow-up to ensure resource adequacy and use.

Chief force integrator. As the POC in a staff for force integration activities, the chief force integrator's role in the financial arena is to ensure that resource requirements for new organizations, equipment, and facilities are integrated into the budget. Timely dissemination of information to the functional staff, monitoring of key resourcing milestones, and continuous coordination with comptroller personnel are essential. The chief force

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integrator also participates in established financial management decision and coordinating committees.

System managers. Designated system managers act in the capacity of equipment experts. As such, they play an important role in identifying unique requirements that impact on one or more functional areas. System managers act as agents on behalf of force integration staff elements. They are valuable to the processes that track, monitor, and follow-up fielding events. System managers may have a direct role in resource programming activities for their designated system(s) or act in an advisory capacity.

Special committees. Force integration resource planning, programming, budgeting, and execution at installation and division levels are conducted within the framework of existing management organizations. The PBAC is an installation organization made up of program and service directors. The PBAC is responsible for providing the commander with advice on financial policies and procedures as well as recommending distribution of resources to satisfy mission requirements. The committee plays a vital role in the development of force integration budget submissions, subsequent execution of programs, and the review of program performance. At the division level the Program Budget Advisory Group (PBAG) performs functions similar to the PBAC. Other special purpose organizations (for example, special MRIS working groups) may be formed periodically to facilitate resource management during periods of intense activity.

Resource Requirements and Programming Resources

Timely and accurate resource estimates at the installation or division level are dependent on the staff's ability to gather all relevant force integration resource information. There are many sources of information available at the installation or division level that provide the data to formulate estimates for additional dollars and new facilities. Chapter 7 discusses these sources of information. Installation and division resource requirements are incorporated into the POM through the MACOM PARR. Modernization resource cost estimates are developed through MRIS. The current method of MRIS preparation is based on a top-down approach.

Top-Down Approach

The top-down approach to the materiel sustainment process relieves MACOMs and participating installations of the burdens associated with the intensive, time-consuming, complex, and inflexible MRIS process. Under the top-down approach, the MACOMs review cost rates top-loaded by HQDA and recommend adjustments reflecting their own unique cost rates. This approach is supported by a model that calculates costs based on cost rates, distribution plans for the equipment items, and operating tempos as established in AMIM, TAEDP, and programming guidance documents.

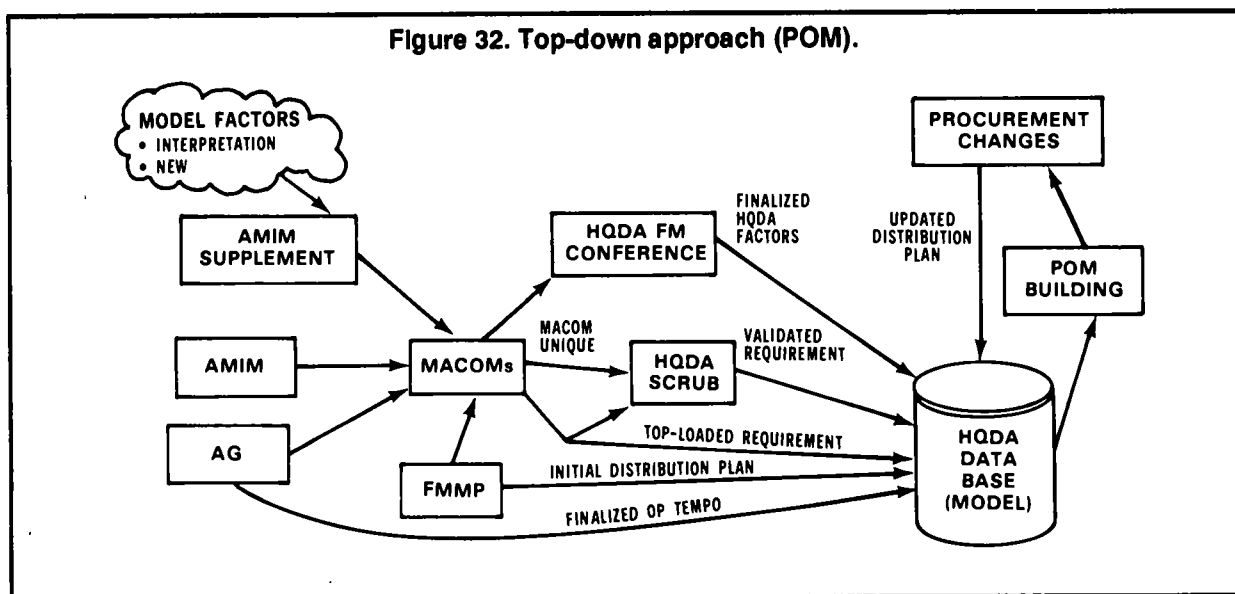
The top-down process allows MACOMs and subordinate organizations to focus efforts on validating cost factors. Since the top-down model computes multiplication quickly and accurately, HQDA will be able to run "what if" drills during POM development. Changes in the distribution plan or operating tempos can be quickly fed into the model, making corresponding materiel system sustainment requirements available to the Army's senior decision makers (Figure 32).

The AMIM, distribution plans, and programming guidance contain planning information for HQDA's intensively managed systems. The MACOMs, in coordination with subordinate agencies and installations, evaluate the cost rates for HQDA's intensively managed systems to determine their correctness. Based on the review process, MACOMs provide input to HQDA during periodic force modernization conferences, which result in the revision and finalization of established cost rates.

Later in the PPBS cycle, HQDA provides the MACOMs with the top-loaded requirements based on the model. These requirements consist of the intensively managed systems sustainment costs based on HQDA rates. The balance of the intensively managed systems sustainment requirements reflects MACOM-unique requirements.

At a joint scrub, HQDA reviews and finalizes the MACOM-unique requirements. The MACOMs receive the top-down model as well as finalized cost rates and operating tempos for the intensively managed systems. By running the model, the MACOMs determine their total funding requirements. The only ingredient missing is the finalized POM distribution plan. Headquarters, DA, gives the MACOMs the finalized distribution plan when POM funding levels are locked into place.

Figure 32. Top-down approach (POM).



During POM development, procurement changes are incorporated into the top-down approach via an updated distribution plan. This can be used to determine adjustments to the materiel system sustainment requirements.

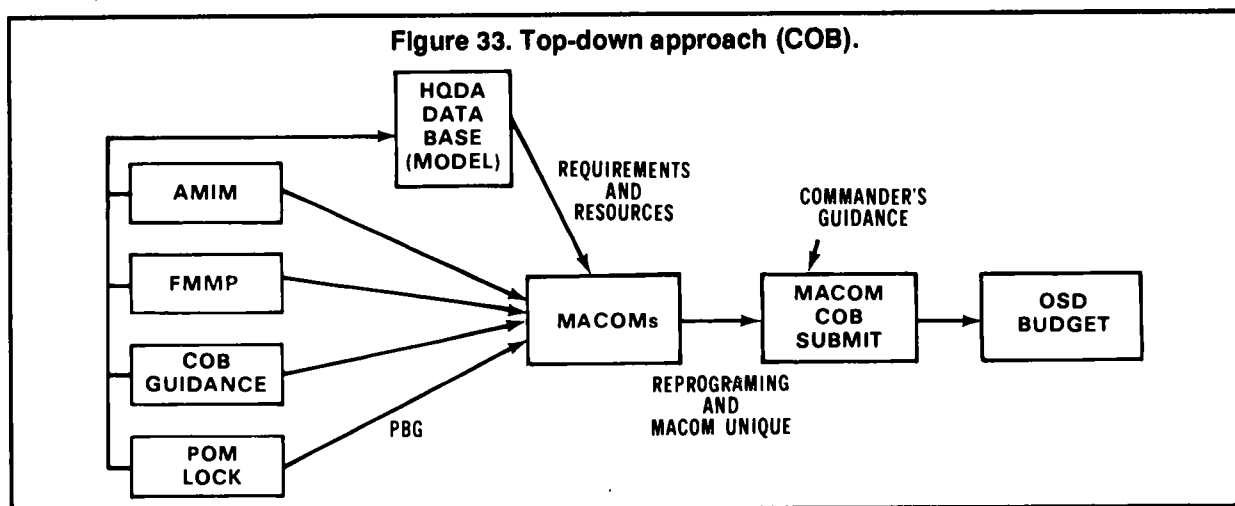
The top-down approach to the COB begins with the development of the MACOM COB (Figure 33). The MACOMs continue to receive AMIM, FMMP, and COB guidance and PBG containing the POM's lock funding levels. In addition, HQDA provides the MACOMs with top-loaded COB requirements and resources levels. The

MACOMs reprogram certain elements as necessary, apply MACOM-unique factors, and use the commander's guidance to develop the MACOM COB submission.

HQDA Factors Versus MACOM-Unique Factors

Some factors will always be applicable to only one MACOM. These factors are designed as MACOM-unique factors. All other factors will be

Figure 33. Top-down approach (COB).



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HQDA factors. Figure 34 contains examples of HQDA factors and MACOM-unique factors.

Funds distributed to subordinate organizations in the fenced category are those that normally support intensively managed equipment systems. Distribution and control of these funds are restricted for use to support these programs. Within the category of funds supporting nonintensively managed systems, commands have more flexibility in distribution and control. Management of force integration funds within MACOMs is supported by a funding allowance system. This relatively new strategy gives fund control to the MACOM with funding targets being issued to subordinate installation or major subordinate command commanders. Organizations must optimize control of allocated funds, particularly those supporting intensively managed systems. MACOMs may impose spending targets for these programs. If targets are not

met, units may have funds withdrawn from them to be distributed elsewhere.

To ensure that dollars are used wisely, the Army is continually under budget execution scrutinization. Units must accurately justify and keep updated resource requirements for their future force integration needs. An internal MRIS process serves this purpose. In the absence of required participation in the MRIS process by some MACOMs, installations or divisions need this detailed information to facilitate internal reprogramming, reprioritization, and reallocating tasks that arise routinely. In addition, budget executors must take great care to accurately track obligation of fenced funds. Accurate historical cost information will enhance future justification of sustainment requirements and facilitate optimization of available dollars during execution.

Figure 34. HQDA factors and MACOM-unique factors.

	HQDA FACTORS	MACOM-UNIQUE
OPERATING MACOMs — FORSCOM — USAREUR — EUSA — NGB Etc.	REPAIR PARTS POL CIVILIAN FIELD MAINTENANCE	SITE ACTIVATION NEW-EQUIPMENT TRAINING SUPPORT MILITARY CONSTRUCTION, ARMY TARP
AMC	P2-TPUMF P7M-DEPOT MAINTENANCE P7S-SUPPLY NETT (NEW-EQUIPMENT TRAINING TEAM) 1st DESTINATION TRANSPORTATION	PM OFFICE MCA PIP/MOD APPLICATION
TRADOC	REPAIR PARTS POL CIVILIAN FIELD MAINTENANCE TRAINING DEVELOPMENT COMBAT DEVELOPMENT	TRADOC SYSTEMS MANAGER OFFICE MCA
OTHER	2d DESTINATION TRANSPORTATION OVEROCEAN TRANSPORTATION AND PORT HANDLING	MANPOWER

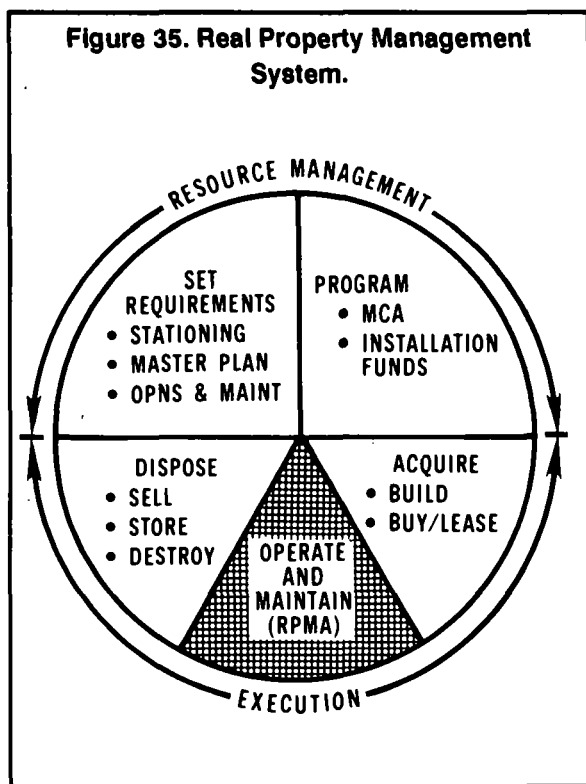
SECTION II. FACILITY MANAGEMENT

In 1982, a MACOM commander stated that "facilities represent the absolute constraint on our ability to execute [modernization] initiatives." That is why facilities are so important in the force integration process.

One of the major resource constraints in the force integration process is facility construction and management. Management of the Army's facilities and construction programs is big business. The Army dedicates over 51,000 people to the acquisition and management of its real property. The condition and nature of that real property greatly affects the Army's ability to function at maximum efficiency. It is also directly linked to the Army's ability to modernize and restructure.

Real Property Management System

The Real Property Management System (RPMS) is the Army's basic management system for facilities (Figure 35). It is a continuous process composed of five components:



Determination of requirements. This involves stationing decisions, mission changes, master planning for installations, and planning for force modernization or force structure support facilities.

Programming resources. This component involves both construction and operation and maintenance requirements.

Acquisition. This is principally the design and construction of new facilities, as well as the purchase or leasing of existing facilities.

Operation and maintenance of the Army's physical plant. This includes operation, maintenance, and repair of the existing plant and utilities systems, minor construction, and such services as fire prevention and protection.

Disposal. Disposal involves the sale, destruction, or storage of surplus or irreparable real property.

As decisions or changes are made in each phase of the cycle, impacts are felt and adjustments made in all other parts of the system. The system is truly one where individual decisions impact on the effectiveness and efficiency of the whole.

Requirements Planning

Facilities planning serves as the initial step of the RPMS. It addresses the integrated management of the Army's facilities inventory from early planning through property disposal. The planning component of RPMS consists of two distinct but interrelated phases—scenario and master planning and the five-year program. At HQDA level, the Assistant Chief of Engineers (ACE) is responsible for installation and facilities planning.

Master planning is the responsibility of each installation commander. The commander acts as the chairman of the installation planning board. The board—

- Guides development of the master plan.
- Effects coordination with other HQDA, DOD, or federal agencies, and local, county, or state governments.
- Ensures that plans and programs are developed in harmony with environmental, energy, safety, and security requirements.

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The chief of engineers—

- Provides technical review.
- Provides criteria and guidance for plan development.
- Approves Army master plans.

The district engineer, when requested and funded by the installation—

- Assists in the preparation of the installation master plan.
- Acts as a member of the installation planning board.

Master planning provides total construction requirements for installations. Based on mission and dollar constraints, projects are put in priority order for accomplishment and transmitted through the appropriate MACOM to HQDA. The second phase of facilities planning entails the development of the projected five-year program and the subsequent identification of facilities requirements that shape all real property programs.

Capability planning is an extension of each of the installation's master plans. Capability plans identify maximum installation population and missions under maximum expansion of utilities, land use, and facilities. Both master planning and capability planning are useful for emergency expansion, mobilization, or peacetime restationing.

Since the Army's programs and budget are updated on an annual basis, the process of developing valid facilities requirements is complicated. It requires close cooperation among staff elements at HQDA, MACOM, and installations. Each MACOM submits an annual update of the five-year MCA program in the spring.

It is essential that these annual MCA updates follow the Army POM that is in its final stage of development during the same period. To achieve that correlation, each of the installation planning boards, as well as MACOM staffs, must appreciate and understand the program initiatives in the most recent DOD-approved POM and AG.

The burden of this effort is partially relieved through the use of the Army Stationing Installation Plan (ASIP), which is updated periodically. This document provides a five-year projection of force structure changes at all but overseas Army installations. Projects not included in the five-year

program are listed in the long-range construction program for future consideration.

Facilities planning is further complicated by the fact that more than four years usually transpires between the development of the original programming documents for a particular project and realization of the project. Since the effects of a number of ASIP cycles and other resourcing plans are changed during this same period, it is essential that installation planning boards be sensitive to program changes that would trigger the need to accelerate, delay, cancel, or alter projects at various stages of execution.

Programming

Programming is the orchestration of real property resources to achieve the "best mix" for constructing and maintaining needed Army facilities. Financial resources are programmed against prioritized real property requirements in MCA, Operations and Maintenance, Army (OMA), Family Housing Management Account (FHMA), and NATO infrastructure; minor construction; wildlife conservation; and other fund sources. In general, these programs are developed in accordance with OSD five-year planning and include the following:

MCA. The MCA program's development is followed by a sequence of reviews by OSD, OMB, and four committees in Congress. Program changes continue throughout the review until the MCA program becomes law. Because of a congressional mandate that requires that design of all construction projects be at least 35 percent complete when submitted to the Congress, there is a one-year disconnect between the Army's normal programming and budgeting system and the MCA process.

Guidance year (GY). The GY begins with the Office, Chief of Engineers, providing each MACOM with general instructions and current policy regarding the construction programs in the PBG and published army guidance. During the year the MACOMs submit their updated five-year MCA program that begins with the GY. The programs and priorities of the MACOMs are compiled, integrated, and further prioritized from an overall Army viewpoint, by the HQDA Construction Requirements Review Committee (CRRC). The CRRC is composed of a cross-section of the

HQDA staff and is chaired by the ACE. The committee's major role is in structuring the overall HQDA MCA program, but its actions must remain consistent with POM priorities or decisions. In addition, engineer divisions and districts are provided initial authority to prepare and award contracts for design or to begin in-house design during the GY.

Design year (DY). Major progress on the project must be made during the DY. To reduce the risk of projects being cut from the program, design on each project must be 35 percent complete before submission to Congress.

Budget year (BY). In the BY, the Army defends the Military Construction Program before OSD, OMB, and the Congress. Final design is substantially completed during this year.

Program year (PY). The PY or program execution year is the year that funds are made available for construction. It is the first year of the execution phase of each MCA program.

Acquisition

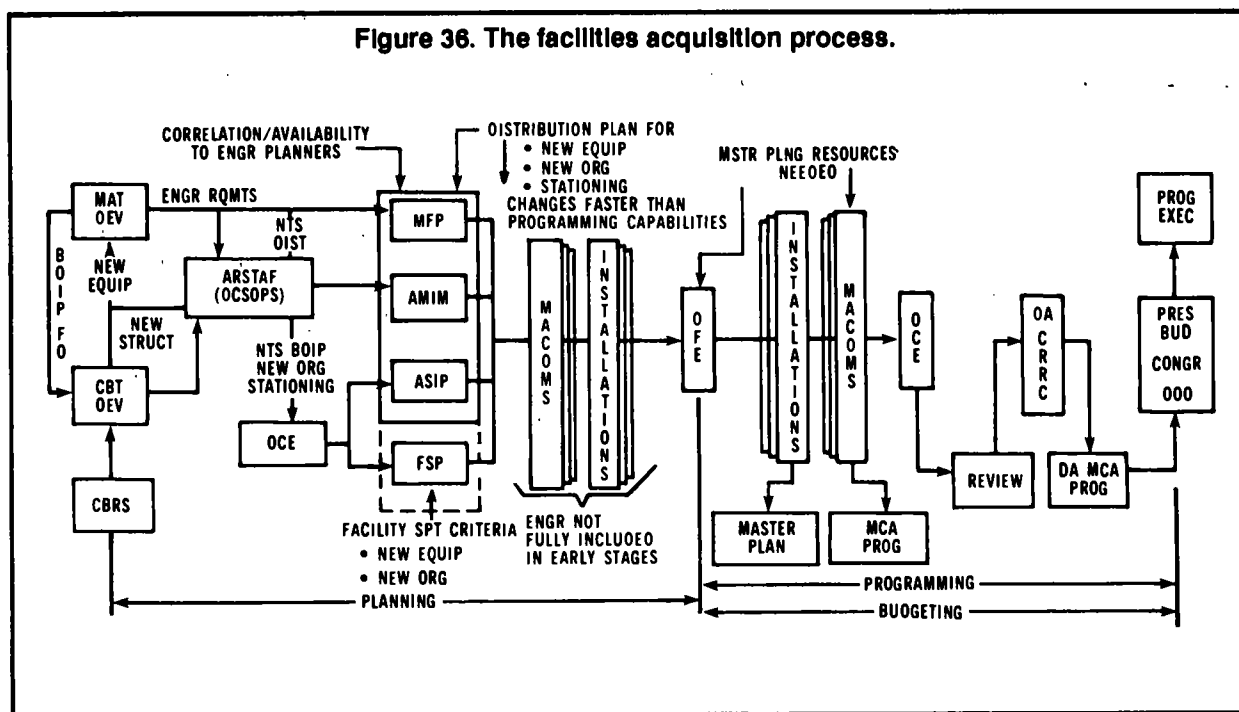
The acquisition process consists of acquiring real property and land facilities. The acquisition of real property is authorized and funded by the Congress as described in the programming process.

The annual fiscal year program of military construction (MILCON) includes major and minor Army MCA, FHMA, National Guard (MCARNG), and Reserve (MCAR) programs. Although the Army may acquire lands with facilities already on them, the acquisition process for facilities consists largely of the design and construction of new fixed facilities on existing Army installations (Figure 36).

The design process consists of accomplishing a project's concept design and then a final design that is based on a statement of user requirements and existing criteria and regulations. The final project design is packaged as a set of contract documents that are advertised for competitive bids from qualified construction contractors. Usually a lump-sum, fixed-price construction contract is awarded to the lowest bidder. The average project construction time is about 18 months. Large multiple-building projects could require up to three years.

The design of MILCON projects is done to a large degree by architect-engineer firms under contract to the district engineer. About 20 percent of the total MILCON program is designed by in-house forces. This is done to maintain the ability of government forces to direct, review, and approve the work done by construction firms. It also provides the design cadre for emergency and

Figure 36. The facilities acquisition process.



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mobilization purposes. Design and construction done overseas are severely influenced by host-nation customs and the Status of Forces Agreement (SOFA).

The design of new facilities or major changes to existing facilities for manufacturing, handling, transporting, storing, maintaining, or testing military explosives, toxic chemical agents, or ammunition requires review by the Department of Defense Explosives Safety Board (DDESB).

Under regulations regarding advertising for design and construction services, selection and approval, audit, negotiations, and approval of fees for smaller and simpler projects having construction costs under \$1,000,000 requires a minimum of 60 days to award a contract. Larger and more complex projects of over \$5,000,000 take up to six months toward a contract and start design.

The design portion of the project generally proceeds parallel to the programming process for projects in any annual FY MILCON program. User requirements, as reviewed by the facilities engineer and approved by the installation commander, form the basis of the project scope. This scope serves both as the basis for design and for submission to Congress. The project design is normally initiated by the district office during the program development cycle's FY (as described in the requirements section).

Project design is intended to proceed to completion of the concept phase (35 percent) by 31 December of the DY. Congress requires cost estimates based on concept-level design. Projects that are included in the annual FY MILCON program proceed into final design after user approval.

Final design of the average project is completed soon after the enactment of the FY MILCON Authorization and Appropriation Acts. Funds are apportioned at the same time. The ideal situation would be to award all project construction contracts in each annual FY program as soon as funds are apportioned. This has not been possible; however, construction contract awards of the annual MILCON programs are being made earlier each year. This is because of improved program development procedures and the use of district capabilities to assist the installations in developing project documents.

Nearly all construction is accomplished by contracts, most of which are competitively advertised, fixed-price contracts. Negotiated fixed-price contracting (one-step) is permitted by DOD and the Congress only for acquisition of Army family housing and for nonappropriated fund construction projects. Negotiated cost-reimbursable construction contracts are generally only authorized in emergencies or in overseas construction.

Contractors are required to accomplish this work according to the contract requirement for time. They are also expected to establish a quality control system to prevent mistakes in materials and workmanship. A resident engineer and his staff normally provide quality assurance and administration of the construction contract. Newly constructed facilities are transferred to the using agency and warranted for one year by the corps. Any difficulties in enforcement of warranties with contractors or vendors are referred to the district engineer.

All acquisition of real property must be in accordance with specific legislative authority. Funds are specifically appropriated for that purpose. Lands may be acquired by purchase, donation, exchange, or condemnation. For permanent requirements, the acquisition consists of either a fee simple title, in which the government owns all the rights in a property, or an easement for such uses as roads, utility lines, and the like. Land and improvements required for short terms are acquired by leasehold. Leasing of improved land and special-purpose space is within the authority of the Secretary of the Army, while leasing general-purpose space is within the authority of the administrator of the General Services Administration (GSA). (Recruiting facilities, which the Corps of Engineers leases and manages as the DOD executive agent for all military services, are examples of special-purpose space.)

The Chief of Engineers has certain delegations of authority to lease both special-purpose and general-purpose space. For major leaseholds (those exceeding \$50,000 annual rental), the exercise of such authority is subject to prior approval by the Assistant Secretary of Defense (manpower, reserve affairs, and logistics). In addition, leases exceeding \$100,000 rental require prior clearance with the Armed Services committees of Congress.

Operations and Maintenance

Unlike construction execution, operations and maintenance execution is not centralized. This is the responsibility of the MACOM and installation commanders. They have considerable flexibility in deciding the resources to be applied to this important task. Although there is a statutory floor that specifies the minimum amount the Army must spend on repair of its facilities, neither this floor nor the amount actually expended in recent years has been adequate to meet recurring requirements. As a result, a growing backlog of maintenance and repair (BMAR) has developed. In order to reverse this trend and reduce deficiencies that affect readiness, the Army has been making a larger investment in OMA.

Inadequate staffing is another serious problem for facilities engineers. All these operations are short in manpower, but the facilities engineers typically are staffed at a lower percentage of recognized requirements than are other base operations. Even with increased contracting as a result of ongoing commercial and industrial type activity

reviews, inadequate personnel strengths continue to be a major problem.

Efforts to provide adequate resources, in both manpower and dollars, for the RPMS are complicated by a number of external influences. Programs such as energy conservation, pollution abatement, and OSHA all absorb shrinking maintenance and repair dollars. Utility cost increases and inflation adversely impact on what can be accomplished with available funds. Obtaining adequate management resources for facilities is a major challenge for Army commanders.

Disposal

Real property that is not required for immediate use may be granted (by lease, easement, license, or permit) to another federal entity, local government, or private party for certain uses as the law allows. Real property that is in excess should be disposed of by transfer to another federal entity or by donation, exchange, or sale as the law provides.

SECTION III. FACILITY PLANNING AT DIVISION LEVEL

Routine facility engineer operations on a post, installation, or military community are diverse and complex. Facility engineering operations require considerable funding, a skilled workforce, and a professional engineering and management staff to meet everyday demands of maintenance, construction, and long-range planning. With the Army's reorganization and with massive equipment modernization, the facility engineering job has become even more complicated. Development of future requirements now demands a closer working relationship on a daily basis with supported units.

Many items of critical planning information are not available to the facility engineer from within his staff. If the installation master plan is to focus future efforts toward efficient and effective facilities, it must include force integration issues. Some challenges in developing a comprehensive plan, when force integration issues become a factor, consist of the following:

- Changes in distribution plans.
- Changes in unit organization and size.
- Changes in system requirements or unstated requirements associated with the system.
- Information made available on a staggered basis system or organizational changes occur.
- Short notification of system fielding.
- Unknown utility requirements such as electricity, water, and telephone.
- Unknown or unidentified range safety requirements dealing with ammunition and lasers.
- Increase in existing requirements.
- Environmental impacts caused by new systems.

In order to identify issues, the facility engineer and his staff must develop a closer working relationship with the division force integration staff. The force integration staff, in turn, must be represented on the master planning board (or council) along with representatives of the division

staff and unit commanders. In order to achieve a successful long-range plan, coordination of the facility master plan must be horizontal, crossing all staff and activity lines, rather than being developed vertically and in isolation from associated issues of force integration.

SECTION IV. ORGANIZING FOR FACILITY PLANNING AT DIVISION LEVEL

Division Staff

In the past, the division staff has been involved in the installation master planning process. The division force integration staff's role becomes increasingly important as the tempo of force modernization and structure changes within the division increases. The staff will acquire a working knowledge of the many factors that impact on short- and long-range facility planning. These are tools available to the staff providing critical information for the master planning process include-

- The TOE by SRC.
- The MTOE (E-dates included).
- The AMIM.
- Equipment distribution plans.
- Technical or doctrinal publications.
- Stationing plans.

These materials allow the staff to identify the scope of change within the division and to predict when it is to occur. In order to ensure full incorporation of force integration issues into the facility master planning process, the division G4, along with the force integration staff, should have responsibility for the following actions:

- Overall staff responsibility for stationing actions within the division.
- Supervision of the status of division restationing actions.
- Coordination with higher headquarters on all facility issues dealing with force modernization.
- Provision of force modernization or restationing information to the facility engineer.

- Resolution of stationing issues that require force modernization funding.
- Assisting in prioritization of MCA projects.
- Providing the facility engineer with changes in the demographic profile based on the units' E-dates.
- Conducting briefings as required and representing the division in all meetings that involve facility planning requirements.
- Updating the Chief of Staff and Commanding General, as required, on facility issues dealing with force integration.

Involvement in these actions allows the division force integration staff to play a central role in development of facility requirements to support future changes within the unit. It also ensures direct and frequent coordination between the staff and the facility engineer on force integration issues.

Facility Engineer and Directorate of Engineering and Housing

The facility engineer has the staff and technical expertise available to ensure that plans are accurate and properly funded. Provided with the information from the division force integration staff, the facility engineer can make recommendations on solutions to short-range problems and develop solutions to long-range facility requirements. Tools that the facility engineer has available to assist the division staff in planning consist of-

- The facility support plans, both equipment and organization-specific, until the PAX computer system in the installation master planning office is updated.

- The SFA, both equipment and organization-specific, as part of the PAX computer system. The SFA, as part of a computer system, offers increased capability to compare future requirements against current on-hand assets.
- Long-range facility master plans.
- MCA plans.
- Minor Military Construction, Army (MMCA), and Installation Funded Program Plans.
- Installation or community maps and blueprints.

In addition, the facility engineer provides a master planning service that has the capability of evaluating future programs and making recommendations on solutions to short-term problems. The facility engineer should consider responsibility for the following actions in order to ensure that force integration issues are incorporated into the facility master plan:

- Overall accountability and identification of facilities available to the division.
- Overall responsibility to program and provide facilities to support stationing actions.
- Providing a stationing or MCA POC for division force integration issues.
- Assisting in the management of stationing actions within the division.
- Developing and processing DD Form 1391 and AE Form 3596.
- Providing data as required to the division force integration staff.
- Monitoring current and future division population data in conjunction with the division G1 and G4.

- Preparing and submitting needs letters that include force integration requirements.
- Prioritizing and submitting MCA-programmed construction lists after coordination with the division staff.
- Identifying to the force integration staff any stationing actions or construction programs that cannot be completed as scheduled.
- Planning and conducting installation planning board meetings.

Regardless of task assignment of responsibility between the force integration staff and the facility engineer, the important point is that the facility engineer is included in all aspects of the force integration process.

Units

Units within the division also have a key role to play in the facility planning process. They must be included in all planning from the initial concept to the actual construction. Ultimately, the units must match the requirements to the actual situation within their areas. Information that unit representatives can provide includes—

- Identification of projected unit-related requirements.
- Identification of system and organizational-unique problems that may not be identified in planning documents.
- Identification of resources to meet projected facility shortfalls.
- Analysis of future projects.
- Integration of issues when matching projects to unit mission and training.

SECTION V. CONSTRUCTION PROGRAMS

Facility Planning Scope

Once responsibility for force integration actions in the facility master planning process has been assigned, it is important for members of the force integration and G4 staffs to understand the scope of facility planning activities and programs. The key

programs are MCA, MMCA, and OMA projects. These programs resource all construction and renovation projects within a division area or installation. Determination of the scope of projects required for force structure changes and force modernization must include the following areas:

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- Ranges and maneuver areas.
- Fueling areas.
- Academic and training facilities.
- Airfields.
- Communications and navigational aids.
- Maintenance areas.
- Administrative areas.
- Warehouses.
- Hospital and medical facilities.
- Housing and community facilities.
- Utilities, including electricity for computer environmental support (air-conditioning).
- Utility distribution systems.
- Museums and memorials.
- Railroads.
- Refrigeration and air-conditioning.
- Roads and parking areas.
- Arms rooms.

Once the requirements have been determined, the cost of the project determines the type construction program funding needed. It also determines the amount of time it takes until the facilities are available.

Military Construction, Army

The MCA program is the principal source of new Army facilities. This program's objective is an orderly and economical development of installations based on sound master planning. The facility engineer is deeply involved throughout the MCA process and is responsible for developing supporting documentation for each project. The MCA projects comprise a portion of the installation master plan. In turn, the installation master plan identifies facility construction needs over a 20-year period. Individual projects that require MCA funding must be identified five to six years from the date the facility is required.

In starting a new project, the facility engineer is responsible for preparation of the project development brochure and DD Form 1391. The project development brochure lists the planning objectives, provides an overview of the project, shows the

relationships of all functional requirements, and is the basis for the cost estimate and conceptual design. The DD Form 1391 is based on the project development brochure and is used by the Army, DOD, and Congress to determine costs and prioritize projects. While the facility engineer is responsible for preparation of these documents, the staff proponent (either the G4 or force integration staff) has primary responsibility to provide the justification for the facility, defend its need, and define functional requirements of the proposed facility.

After the documentation has been prepared, it is forwarded through the chain of command for review and prioritization. The project's approval and funding process can take three to four years from the time the installation master plan board determines that a facility is required.

Once Congress has authorized and appropriated funds for the project, the district engineer accomplishes design and construction. The district is responsible for supervising and administering the contracts for both the design and actual construction. The facility engineer monitors the design and construction to ensure that functional aspects meet installation requirements. The division staff must also take an active role in monitoring the project to ensure that funding and priority are not changed during the planning phase and that it meets unit requirements during construction. Due to the length of time it takes for an MCA project to be approved and constructed, detailed records on the project's history must be maintained. It is important to remember that the individuals starting the project will probably not be assigned to the installation when it is completed.

Minor Military Construction, Army

The MMCA program is another important aspect of the installation's military construction. This program consists of projects of less than one million dollars. Some MMCA projects are submitted to Congress along with the MCA program. Those that cannot be delayed for the normal programming process come under the exigent (requiring immediate action) minor program. Depending on the cost of exigent minor projects, approval for commitment of funds must come from HQDA, the Assistant Secretary of the Army, or

the Office of the Secretary of Defense. Higher cost projects that must be approved by the Assistant Secretary of the Army and the Office of the Secretary of Defense must also be submitted to Congress for review.

The MMCA program has specific limits for cost, scope, and new-start criteria. Army Regulation 415-35 should be followed closely since violation of these limits is considered to be a statutory violation. The most important point is that all projects must result in a complete and usable facility within spending limits. As such, provisions must be made in the total amount of the contract for other cost variables that could push the contract over the assigned spending limit. It is also important to remember that the amount of money available for projects under this program is limited and that projects require a solid justification if they are to be approved. The primary advantage of this program is that the amount of time from concep-

tion of the project to a completed facility is half of the processing time required for MCA projects.

Installation Funded Projects

Projects under \$200,000 are normally funded by OMA, the Army Industrial Fund (AIF), Procurement of Ammunition, Army (PAA), or RDTE appropriations. The facilities that come under this spending limit are normally approved at installation level. Funds for these projects must be programmed in the command operating budget. Once funds are made available, design and construction must be completed within one year. The installation facility engineer resolves the construction contract with the Corps of Engineers. As with MMCA, the project must produce a complete and usable facility within cost limitations. No other funding can be used for any other segment of the facility to bring it up to design standards. The primary importance of this source of funding is that a new facility can be rapidly constructed.

SECTION VI. DETERMINATION OF FACILITY REQUIREMENTS

Staff Interaction

In order to determine the source of funding required to complete any facility, planning must be a horizontal staff effort with all concerned staff agencies contributing. In the case of force integration issues, every staff agency needs to contribute information and planning guidance to the process. In order to determine requirements, identify long- and short-range projects, and separate facility issues from stationing issues, a structured problem-solving approach is required.

Steps to Identify Facility Requirements

To add structure to the decision-making process in determination of facility requirements, the following should be considered:

- The force integration staff must first determine where to distribute the system and when the system is to arrive. The staff then must consider the system's total impact, including all components and logistic training, and maintenance support. The materiel fielding plan and the project manager

provide good sources to start this process. Other sources may be required, but if they are not available, going through the chain of command should provide a resolution. The final goal is a clearly defined set of requirements for the system.

- The facility engineer, with the force integration staff, uses information in the facility support plan to help determine the requirements for the system.
- Concurrent with determination of system requirements, the force integration staff must determine organizational changes. These changes are determined from the TOE and are charted out as far into the future as possible. Effective-dates must be included in the plan.
- The facility engineer has access to organizational facility support plans. This, along with the organizational information provided by the force integration staff, allows the identification of facility needs for organizations over the planning period.

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- Once organizational and equipment requirements have been identified, they must be reviewed to ensure that they are compatible with each other and that there are no redundant requirements.
- The requirements must then be staffed jointly between the facility engineer and force integration staff to determine exact requirements as far as possible into the future.
- Upon determination of all projected needs, the requirements must be compared with current facilities to determine any shortfalls.
- Shortfalls, once determined, are then integrated into the facility master plan for programming.
- Constant review and follow-up are required by both the facility engineer and the force integration staff to ensure that new issues are fully integrated into the process as they occur.

Stationing

Normally, the most immediate concern of units involved with force integration are stationing actions. Because of the length of time it takes to develop new facilities, most units must live with the facilities currently available. In some cases this will force units to fit into facilities not originally designed for them.

In resolving stationing issues there are no set solutions. However, the following points should be incorporated into planning for any stationing or restationing plan:

- Units, along with the facility engineer, must conduct a detailed stationing analysis. This analysis must consider updates of war plans,

facility upgrade costs, change-of-station costs for soldiers, materiel movement costs, maintenance costs, and the impact on soldiers and family members as a result of the move. Also, long-range plans must be checked to ensure that the move is necessary and will not increase turbulence for the unit through repetitive and unnecessary moves.

- After completing the stationing analysis, a detailed plan must be produced. This plan must cover all operational aspects of the move and should address the quality of life aspects for soldiers and family members. This plan must be published well in advance of the unit's required move.
- The plan must then be provided to units that are to be moved and to any other concerned units on the installations.
- Units must then brief the soldiers to be moved. The purpose for moving must be clearly defined. Why is it happening, when, and how will it impact on them? Family members should also be briefed in detail if possible.
- Once the move falls within the planning window for the division training calendar, time must be allocated for the move. This must also include time prior to and after the actual move.

If problems exist with facilities during a stationing action, the issues must be forwarded to the facility engineer and facility master planning board. If the issues are of a severe enough nature that they adversely impact on the unit's operational readiness or on the quality of life of the soldiers and family members, they must be resolved through the chain of command.

CHAPTER 12

Readiness

An important goal of force integration efforts is to maximize modernization programs' increased capabilities while minimizing negative effects on readiness. For example, the magnitude of change to a unit caused by extensive modernization programs may overload the unit's ability to assimilate changes. This could adversely affect operations and sustainment and individual and collective training status. Therefore, readiness goals have a direct relationship to force integration.

Readiness management at the corps, division, and brigade levels involves two primary aspects: awareness of the effects of modernization programs on readiness and readiness reporting, and awareness of actions that minimize negative effects on readiness. These aspects are the focus of readiness management at the execution level. They are also the basis for the concepts and techniques this chapter discusses.

SECTION I. FORCE MODERNIZATION EFFECTS ON READINESS

Units are affected by modernization programs that cause changes in personnel, equipment, and training. Such changes also increase demands on Army resource support systems to provide resources for these changes. Such demands in turn influence the Army systems for allocating resources that are available and validating the application of them through the documentation system.

When the Army fails to provide additional or new required wartime resources (reflected in MTOEs), the consequences are significant for both the unit and the Army. Obviously, a unit without varying degrees of required resources will not be capable of accomplishing its full wartime mission. Not only has the Army created a less ready unit; but, based on established readiness status reporting criteria (AR 220-1), the unit must accept degraded status, even though the actual equipment on hand, its operational readiness, and the unit's capability have not decreased. In fact, the unit's capabilities

may increase. As new equipment or personnel are received, readiness and capabilities should increase, but the USR will not change until enough equipment has been received to meet the newly established MTOE criteria.

In addition to resource availability and documentation as factors in readiness management, training requirements associated with assimilation of new concepts, equipment, and new organizations must be considered. An organization may take several weeks or months of training to return to previous levels of proficiency as it makes a major transition. As an organization assesses the impact of modernization programs on readiness, it does so recognizing the potential adverse effects that the lack of resources, the documentation process, and the train-up requirements could have in degrading execution and sustainment. Readiness management works in minimizing these negative effects.

SECTION II. READINESS MANAGEMENT ACTIONS

Synchronizing force integration activities in a way that optimizes the readiness of the organization is accomplished by combining existing management and training concepts with readiness analysis techniques. Readiness managers project the future status of units undergoing reorganizations or transition by determining potential equipment, personnel, or training shortfalls as early as possible before the units' new E-dates. A comparison of current MTOEs with projected MTOEs is conducted to determine new or additional personnel and equipment requirements. It is then checked against known or projected availability of those resources. Based on these assessments, the status can be projected in terms of USR ratings (for example, equipment on hand).

As a unit conducts planning and coordination for equipment modernization programs and force structure actions, it must recognize how each program can influence the readiness condition of each of its subordinate units. The readiness perspective falls into two categories—readiness reporting, seen in the monthly USR, and overall unit readiness, which reflects the many factors that enable the unit to perform its specific mission.

An accurate projection of readiness status also considers available readiness reporting guidance and policies. Army Regulation 220-1 outlines several procedures and rules concerning reporting of units undergoing modernization programs. The projection of each subordinate unit's readiness along with that of the overall condition of the higher level organization (division) is based on a review of the—

- Use of C-Rating C5 (not combat ready, programmed) for periods of transition.
- Impact of transitioning units on composite ratings required of divisions, separate brigades, divisional brigades operating separately, special force groups, and armored cavalry regiments.
- Application of ILO items and authorized substitute items in authorization documentation and in equipment-on-hand calculations.

- Current list of designated exempted reportable equipment items found in AR 220-1 and supplemental guidance from HQDA or MACOM.
- Procedures for use of the mission accomplishment estimate (MAE) for units that anticipate reporting C4 or C5 overall during the transition period.
- Procedures for reporting of COHORT units that are assigned to transitioning divisions or brigades.

The projection of readiness should consider other options available at MACOM level; such as—

- Adjusted E-dates of MTOEs and TDAs to realign the reporting date with projected availability of resources.
- Designating modernization items, ASIOE, or equipment "plus up" items that are not available to support MTOEs and TDAs or fielding dates as nonreportable.

These projections provide readiness managers and force integration planners with the information necessary to determine what must be avoided or planned for when developing near-term and long-range training plans. The projected level of readiness for one or more units (C3, C4, or C5) may necessitate major reprioritization of the sequence of modernization programs and adjustment of training objectives and events. The projected unit readiness status or capability has little meaning unless its impact can be related to the overall effects on operations and training.

Although these previous considerations for minimizing readiness degradation involve paper status, actual readiness must still be analyzed in developing modernization programs. The solutions to instant unreadiness may be inadequate when considering real concerns about unit contingency missions or battle plans. The temporary loss of a unit's capability to conduct its mission because of a transition to new equipment or because of a reorganization (for example, an armored cavalry regiment with a daily border mission) may not be acceptable, regardless of what readiness reporting

solutions are available. In such instances, alternatives that minimize readiness degradation should be considered. Such alternatives are-

- Retention of old capabilities until new capabilities are proven.

- Phased introduction of equipment and structures.

The determination to use these or like alternatives must be influenced by weighing supportability trade-offs.

CHAPTER 13

Sustainment

None of the approaches or force integration management models previously discussed will matter unless the processes for managing change are sustained mechanically and until the change is fully internalized by all organizations affected. The human factor must be evident to develop institutional and personal ownership of change. As soon as change is introduced into a unit, the speed and volume of change can easily cause selective forgetting and a return to earlier habits. If we do not put a "human touch" on the largely technical, mechanical, or intellectual aspects of force integration, soldiers and commanders will continue to resist change, as a natural human tendency, and be challenged by change. The direct consequence will be degraded combined arms training and a less than satisfactory integration effort.

Implementing force integration is a considerable leadership challenge. A division fielding new equipment or transitioning to new organizational structures or both is really two divisions—one that is committed to integrating new capabilities and one that is committed to maintaining its current readiness posture. This creates internal stress for the command and control apparatus that is only designed and staffed to maintain—not to change. Thus, during periods of change, there is an increased potential for conflicting priorities, unclear guidance, and ambiguous situations. A division can lose sight of its objectives and direction. It is up to the division's leadership to minimize the adverse impact of these problems while encouraging maximum effort from its soldiers and units. They must control the action instead of letting the action control them. They must seize the initiative by motivating soldiers to change, managing and controlling the changing situation, and creating an atmosphere of teamwork.

SECTION I. MOTIVATING CHANGE

A unit must be motivated to change, and the commander should consider the following motivational techniques when initiating change:

- Selling the new configuration to the unit. The commander should use information and communications to show the unit what it will look like in the future. He should create a positive vision of the future. He should also carefully outline the differences between the

present level of functioning and the expected future performance in order to generate a sense that a better unit will be formed when the new organization is in effect. The commander can use this information to generate excitement about the new way of organizing.

- Asking unit members to participate in planning and executing the change. The commander can use this technique to produce a

sense of commitment and identification with the changeover throughout the unit. These will, in turn, contribute to troop motivation. One way this can be done is by having officer and NCO professional development classes that identify and solve real or anticipated problems in the changeover.

Commanders and staffs can also devise various methods to "sound out" soldiers. In-progress reviews and after-action reviews (both formal and informal) can identify problems and contribute to solutions. Any method allowing soldiers to shape their own futures helps ease resistance.

- Educating and training unit members to increase their confidence with new equipment and procedures. When confronted with new equipment and new procedures, soldiers may be reluctant or unable to use them. This

may stem from the fact that their knowledge or skill levels do not allow them to approach the tasks or equipment with confidence.

- Giving rewards and incentives to the soldiers for their successes during the changeover period. Commanders should review and orient recognition, promotion, performance evaluation, job assignments, and status symbols to support the integration effort.
- Maintaining an understanding climate that allows soldiers to express their frustrations, problems, and apprehensions. This does not mean that commanders should tolerate a lack of discipline; it does mean that time and opportunities have to be provided for soldiers to disengage from the previous way of doing things and to air their problems with job adjustments.

SECTION II. MANAGING AND CONTROLLING CHANGE

To manage and control changes, a recommended strategy is to create an ad hoc staff at the fielding unit level for planning and monitoring the action. This staff would work with the normal staff; however, the commander would oversee this effort. He would be the final decision maker and mediator in conflicts between the integration effort and normal mission requirements.

The commander sets the goals, standards, and tone for change. He takes strong action to prevent

a "we-they" syndrome from developing between the normal staff and the project staff. He establishes monitoring systems to measure progress and to provide feedback. Doing so allows midcourse adjustments. Most important is that leaders remain visible. The actions and visibility of top leaders demonstrating confidence and consistency helps reduce perceptions of "drift" or lack of leadership.

SECTION III. CREATING A TEAMWORK ATMOSPHERE

Force integration within a division is a team effort. It is especially vital during implementation that teamwork be maintained in spite of reorganization actions that disband intact teams and establish new ones. Leaders at every echelon must take steps to generate a feeling of stability and confidence in the unit's ability to succeed in the transition. The idea is to promote the feeling that the transition may have only temporary negative effects and that, overall, the unit will be more effective because its combat power will be significantly enhanced by—

- Presenting a powerful, graphic, understandable, and simple version of the change's end result. The changeover from the present to the future should be portrayed as exciting and beneficial. Force integration and a successful changeover would then become a focus for the unit's activities.
- Accentuating where no change will occur. Areas of no change give soldiers a sense that while some things may change others will remain the same. This generates a perception that change has definite limits, thus

creating a climate of stability. For example, squads and crews are primary work groups. Efforts should be made to keep these work groups intact. Another approach is to use a combination of experienced soldiers and new soldiers to form new work teams rather than putting together all new people who do not know each other.

- Having clear, announced plans and activities that demonstrate the unit is ahead of schedule instead of behind it. This in itself will generate confidence and trust that the unit can succeed in its transition. Appointing a unit transition management group that has high visibility produces a sense of stability and order at the top of the unit.
- Providing planning time. Activities and planning time should be provided to allow a newly formed work group or team to plan how they are going to work and train together under the unit battle focus.
- Communicating continually with the unit by—
 - Explaining in simple terms exactly how each group and person will benefit from a change.
 - Using simple language and simple graphic symbols.
 - Maintaining excitement by dramatizing, highlighting, and focusing on key individuals and groups.
 - Repeating messages regularly and consistently using every medium available to the organization (from DFs to monthly pay calls).

- Investing resources (time, money, energy) seriously in these communications.
- Planning for feedback from all levels of the organization.
- Providing easy channels for presenting complaints and suggestions. Such activities need to increase as the rate of change increases.

- Increasing external support. Key groups outside the unit must support the change. Supporting units, headquarters, and other staffs must be aware of what is going on in the unit so they can be prepared to assist, or at least not interfere with, the unit's transition. Support and cooperation can be increased if higher and supporting headquarters are aware of the unit's plan.
- Holding a "graduation exercise" (FTX, ARTEP, CPX, et cetera) upon completion of a new equipment fielding or other modernization effort. For example, new-equipment training can usually have either a qualification firing or a maneuver associated with it which can be used as an indicator of progress. The exercise should symbolize the completion of the changeover with something tangible—trophies, certificates of qualification, adoption of a motto, or so forth.
- Using the positive experience of units that have already made the shift ("Here's how the Third Infantry Division did it!"). Leaders should use the problems that other units encountered as a learning tool ("Watch out for these problems."). They can also use the success of other units as an aiming point ("Look how well the Second Battalion did in REFORGER after its conversion.").

SECTION IV. SUSTAINING CHANGE

After implementing the change, it must be sustained. The sustainment effort must be focused and synchronized as a part of a greater whole as troops synchronize three simultaneous battles on the AirLand battlefield—close, rear, and deep. Fortunately, the Army has a doctrinal model for fighting the AirLand Battle that offers an analog for sustainment of change and force integration action. That model can be applied to force

integration and the management of change in units. An analysis of the process of managing change will often reveal that even though units have successfully organized and planned for and executed change on a near-term basis, follow-through is sometimes lacking. Unit resources, both human and organizational, are often nonuniformly applied to sustainment of force integration actions. Therefore, combined arms training sustainment of the newly

defined unit battle tasks will fall short of the unit standard.

There are two serious shortcomings to traditional division approaches to the force integration process. First, tactical units tend to rely on specific individuals or staff sections for sustainment. Second, there are a number of processes that are already used to verify the steady-state condition of multic echelon combined arms sustainment training but that have not traditionally focused on force integration actions. These processes include inspector general (IG) and command inspections; maintenance management reviews (MMR); quarterly training briefs (QTB); terrain walks, as well as battle plan briefs; and various special investigations or audits by the IG and controller.

Failure to fully assimilate force integration into existing processes will result in an unacceptable time lag for full acceptance and incorporation of new combat capabilities into combined arms training and battle focus planning at every echelon. And, as a result, commanders and staffs alike, absorbed on a daily basis with their own close-in battles, will be increasingly frustrated as the tempo of change increases. They will also be tempted to put the AOE and AirLand Battle doctrine into the too-hard-to-handle category.

There are two resource categories essential to the sustainment effort: human dynamic and systems integration.

Human Dynamic

This category includes individuals who can influence sustainment efforts; such as—

- The IG.
- The CSM.
- The ADCs.

Systems Integration

This category includes processes that have a direct influence on force integration sustainment; such as—

- Command inspections.
- IG inspections.
- MMRs.
- QTBs.

- Monthly USRs and 2715 reports.
- Special IPRs.
- Training design of unit priority battle focus training events.
- Systems reviews.
- Quarterly terrain walks.
- Combined arms training exercises.
- General defense or war planning.

These are the division-level processes by which the Army verifies sustainment of any action in the unit, including—

- IG inspections, to contain a focus on—
 - Total system fielding, including logistics and personnel.
 - Integrated vertical follow-through of specific aspects of force integration; for example, updating PLL and ASL and outstanding requisitions to match the unit's documented force structure and fielded equipment.
 - Human dimensions.
- QTBs, to contain increased focus on horizontal combined arms integration of new doctrine, structure, or equipment, including—
 - Validated or redefined battle tasks for new equipment or force structure.
 - Total combined arms integration of the modernized brigade and division slice.
- USRs or 2715s to—
 - Highlight current personnel or equipment shortfalls that arise from disconnects in MTOE documentation and system fielding or force structure changes.
 - Forecast statistical readiness problems that arise during transition to AOE and Army 21 force structures.
 - Identify division solutions, including training, to overcome statistical readiness problems.
- MMRs, to contain an expanded focus that brings a broader battle support flavor that would—

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- Ensure each unit maintains only that equipment or personnel density for which it is documented.
- Review PLL or ASL and requisition processes to ensure they match fielded force structure and equipment as well as reconcile unit budgets with currently approved documents.
- Terrain walks for general defense plan (GDP) or major exercise purposes couched in terms of-
 - The emphasis on AirLand Battle doctrine and METT-T.
 - Integration of the upgraded capabilities in the division's elements of combat power.
 - Changes in tactics and procedures.
 - Validation of battle focus training tasks.
 - Redefinition of combined arms integration by system.
- Command training guidance (CTG) to reflect-
 - Integrated combined arms force integration training tasks.
 - Sustainment training of previously fielded equipment and force structure.
 - Pre-execution definition of training tasks or events for new force integration actions.

Thus, force integration is really the synchronization of three simultaneous processes, consisting of the future battle in terms of planning, the hand-off and execution of "now" force integration actions, and finally continuous sustainment.

The net result of this evolutionary force integration process, based on the combined arms multiechelon sustainment training program, is not a mere intellectual abstraction. It is, rather, a working management and leadership model for division-level force integration actions. It will materially contribute to the US's ability to fight and win the AirLand Battle with the doctrine, force structure, and equipment fielded at any given time. Rather than putting rapid change in the too-hard-to-handle category, it approaches force integration as a series of multi-echelon combined arms battle tasks that need to be done "right, on time, and as a matter of routine."

An important aspect of the force integration process is the lateral transfer of the cumulative information and lessons learned from each previous force integration action. Such a transfer must become a vital part of the unit's battle focus and combined arms multiechelon sustainment training program. Then units will be able to maintain equilibrium in a time of unprecedented change.

APPENDIX A

Total Systems Fielding Assessment List

This total systems fielding assessment list is an organizational modernization evaluation tool. It has been compiled from several sources and is tailored to the needs of organizations involved in planning, coordinating, and executing change. Such a checklist's primary purpose is to focus the efforts of individual staff action personnel, special task forces, or units on all relevant factors (from the organizational perspective) necessary to ensure that the result of equipment fielding (with related force structure change) programs have an optimal effect on readiness.

● Assessment Element or Subelement

- Maintenance planning
- Maintenance concept (organization, DS, GS, depot)
- Maintenance task requirement
- Maintenance standards
- Operational readiness float (ORF)
- Repair-cycle float (RCF)
- Contractor support
- TDA maintenance
- Host nation support
- Interservice support agreements
- Battle damage assessment and repair
- Direct exchange

● Support equipment and TMDE

- Test, measurement, and diagnostic equipment (common and peculiar) requirements
- Calibration equipment (requirement and procedures)
- Automatic test equipment (requirement)
- Support and handling equipment (requirements)
- Electric generators (requirement)
- POL and ammunition vehicles (requirements)
- Tools and tool kits (requirements)
- System major items components
- Associated support items of equipment (ASIOE) requirement
- Recovery or evacuation equipment (requirement)
- DS or GS maintenance facilities (components)
- Test program sets
- Installation kits (communications, weapons, chemical detection, smoke, et cetera)

Appendix A

● Supply support (including packaging, handling, and storage)

- Initial provisioning
- Spare or repair parts
- Basic sustainment materiel (POL, ammunition, consumables, et cetera)
- Handling equipment
- DLA, Army, or other service equipment
- POMCUS stocks
- War reserves
- Major and secondary items
- BII and on-board spares
- Disposal or demilitarization [procedures]
- Sets, kits, outfits
- Physical dimensions
- Container requirements
- Storage space
- Administrative support storage
- Preservation, packaging, and handling
- Pallet, hardstand, and air delivery
- Decontamination equipment and precautions
- Precautions for explosive or radioactive material
- Handling constraints
- Lifting requirements
- Security requirements (system, parts, manuals, et cetera).

● Transportation and transportability

- Rail, surface, water, air weight, size, and cube limits
- Width and height constraints (CONUS and overseas)
- Customs requirements
- Airdrop requirements
- Transportation configuration loading requirements
- Special precautions
- Unit mobility impacts
- Container compatibility
- Tie-down provisions
- Mobile maintenance and supply-van configurations
- TMDE and special tools transport requirements
- Support equipment transport requirements
- Transportability approval

● Technical data

- Technical manuals
- Technical bulletins

- Transportability guidance technical manuals
- Identification lists
- Component lists
- Repair parts and special tools list
- Maintenance allocation chart
- Lubrication instructions
- Supply bulletins
- Provisioning documentation
- Calibration procedures
- Drawings and specifications
- Software documentation
- Facilities use
- Packaging procedures and materials
- Depot maintenance work requirements
- Demilitarization and explosive ordnance disposal procedures

● **Facilities**

- Training facilities requirements
- Depot maintenance facilities requirements
- Mobile maintenance facilities
- Fixed IM and TDA maintenance facilities
- Fixed and mobile storage facilities, including ammunition and special weapons storage
- Testing facilities
- Facility physical security requirements
- Facility utilities (such as common or unique organic or commercial power)
- Special facility requirements
- Operational facilities (barracks, dining, administration, BASOPs, et cetera)
- Real estate

● **Training and training devices**

- Instructor and key personnel training
- New-equipment training plan
- New-equipment training team requirements
- Individual and collective training plan.
- Resident school training
- Army training and evaluation program
- Training materials, aids, and devices
- Training ammunition
- Joint Service training
- Training equipment
- Extension course training

Appendix A

- Student training requirements
- Field manuals
- Soldier manuals
- Skill levels and skill specialties
- Skill qualification test
- Training instructions
- Materials and lessons
- Joint Service training agreements
- Training device support

● Manpower and personnel

- Numbers, skills, and grades
- Retention constraints
- Recruitment or literacy requirements
- QQPRI
- Special skill requirements
- Hazardous skill requirements
- Human factors considerations
- Security clearance requirements
- Stabilization requirements
- Reclassification requirements
- OPD Impact

● Computer resources support

- System operational software
- ATE operational software
- Post-deployment software support (PDSS) centers
- PDSS product improvement
- PDSS test verification process

● Standardization and interoperability

- System family approach
- Interoperable systems
- Proven components and subsystems
- Other Services. NATO Allies Interface (AR 12-16)

● Materiel fielding planning

- Timing; schedule
- Letter of notification
- Materiel fielding plan

- Joint integrated logistic support plan (for multiservice systems)
- Materiel release review
- Materiel fielding under total package concept
- Materiel fielding agreement
- Mission support plan
- Supportability assessment
- Coordination of personnel requirements
- Materiel transfer plan
- Materiel transfer agreement
- Memorandum of agreement
- Request for call forward
- Displaced systems

● **Doctrine**

- Impact on operational doctrine
- Impact on support doctrine
- Impact on training doctrine
- Impact on joint doctrine
- Doctrinal literature program update
- DTT requirements

● **Distribution**

- Distribution plan published
- DAMPL interface
- Unit integrity; unit set applicability

● **Redistribution**

- Recipient's identification
- Transfer standards
- Repair and support resources
- Accompanying ancillary equipment and publications
- Reverse SLAC and PLL or ASL
- Materiel transfer plan
- Materiel transfer agreement
- Displaced equipment training or plan

● **Resources (programming and execution)**

- Modernization requirements in MRIS, PARR, and COB
- Cost estimates in AMIM
- Historical cost data or cost handbooks

Appendix A

- Resource guidance in PBG and BMG
- Modernization fund allocation; control policies and procedures

● Documentation

- TOE and ITOE review
- Resource availability review
- MTOE publication schedule
- Readiness report analysis
- Equipment modernization and force structure action interface
- MTOE review or follow-up

● Command and control

- Contingency plan impact
- Standard operating procedures impact
- Communications requirements
- Frequency spectrum requirements
- Interchange agreements
- Reserve Component (Roundout or CAPSTONE) impact

APPENDIX B

Modernization Milestones

This appendix provides a model that can be used to develop milestone charts or lists for all modernization equipment systems. The model depicts months prior to the N-date (FUED for an Army developmental item and simultaneous MTOE and TDA E-dates for the affected unit) or sequential actions necessary to manage the introduction of new systems and associated MTOE changes. Since systems and related organizational requirements are different, the model may vary from MACOM to MACOM or Installation to Installation. It generally reflects regulatory milestones in documentation, equipping, personnel management, training, facilities, and resource functional areas. The model is a basis from which to develop Installation- or organization-unique detailed lists to be used by staff agencies in tracking and controlling modernization actions.

<u>Months</u>	<u>Action</u>
N-60	Receive MACOM distribution plan.
N-60	Receive available Information (AMIM, MFP, FSP, VFAS, FMMP, TAEDP). Determine total system or organization requirements (personnel, equipment, training, support, facilities).
N-60	Submit MCA requests.
N-60 In MACOM	Coordinate or validate programming input. Submit Initial MRIS for inclusion PARR.
N-28	Conduct TOE review.
N-27	Submit TOE change issues.
N-25	Receive initial draft MFP. Determine if system is total package or nontotal package.*
N-24	Submit minor MCA requests.
N-24	TOE reflecting changes to programmed structure and/or new equipment is available.
N-22	Verify that MTOE or TDA reflect authorized personnel and equipment, including planned modernization items (prior to MOC window).

*For developmental acquisition items.

**For nondevelopmental acquisition items.

Appendix B

<u>Months</u>	<u>Action</u>
N-21	Submit comments on initial draft MFP.*
N-21	Submit proposed MSP.*
N-21	Determine unit funded items requirements. Notify comptroller.
N-18	Publish and distribute new MTOE or TDA to units.
N-17	Receive updated draft MFP.*
N-16	Update property books according to new MTOE or TDA.
N-14	Submit comments on updated draft MFP.*
N-14	Submit updated MSP.*
N-13	Receive final draft MFP and MFA (for signature by MACOM).
N-12	Appoint system manager or action officer.
N-12	Request off-post school quotas.
N-12	Forecast ammunition for NET and sustainment training.
N-12	Determine impact of reorganization and system or both on readiness reporting.
N-12	Determine security and physical security requirements.
N-12	Submit final MSP.*
N-12	MACOM submits signed MFA.*
N-12	Receive initial draft MFP for nondevelopmental items (NDI) systems.**
N-12	Submit Installation funded (OMA) construction requests.
N-11	Submit Materiel Assistance Designated (MAD) I report (EOH), if required, for any USR-reportable item that changes.
N-10	Submit MTOE personnel and equipment requisitions (OCONUS).
N-9	Submit comments of initial draft MFP. Submit proposed MSP.**

*For developmental acquisition items.

**For nondevelopmental acquisition items.

<u>Months</u>	<u>Action</u>
N-8	Receive final MFP (with approved MFA) and MRL.
N-7	Conduct MRL coordination meeting with materiel fielding command.
N-7	Submit MTOE personnel and equipment requisitions (CONUS).
N-6	MRL scrub complete. MSP verified.*
N-6	Drop requisitions for MRL by fielding command (total package fielding).
N-6	Receive displaced equipment disposition; turn in standards instructions from MACOM or NICP.
N-5	Requisition Bulk Class III, Class V, Class VIII items.*
N-5	Receive final draft MFP, MFA (for MACOM signature), and MRL.**
N-4	Submit comments on final draft MFP, signed MFA (MACOM), and final MSP.**
N-4	MRL scrub complete.**
N-4	Drop requisitions for MRL by fielding command.
N-4	Requisition Bulk Class III, Class V, Class VIII items.
N-3	Conduct system joint supportability assessment (OCONUS).
N-2	Conduct system joint supportability assessment (CONUS).
N-1	Total equipment package to staging site.
N-1	Conduct final coordination for inventory and handoff.
N	Conduct joint inventory with fielding command. Execute handoff.

*For developmental acquisition items.

**For nondevelopmental acquisition items.

Glossary

A

ABE	Army Budget Estimate
AC	Active Component
ACE	Assistant Chief of Engineers
ACF	abbreviated cost form
ACofS	Assistant Chief of Staff
actv	activity
ADA	Air Defense Artillery
ADC	assistant division commander
A-E	architect-engineer
AF	abbreviated form
AG	Army Guidance
AIF	Army Industrial Fund
AIT	advanced individual training
ALO	authorized level of organization
AMC	United States Army Materiel Command
AMIM	Army Modernization Information Memorandum
AMMS	Acquisition Management Milestone System
AMT	Army Modernization Training
AOE	Army of Excellence
AOP	additive operational projects
AR	Army regulation
ARNG	Army National Guard
ARSTAF	Army Staff
ARTEP	Army Training and Evaluation Program
ASAP	Army Streamlined Acquisition Process
ASI	additional skill identifier
ASIOE	associated support items of equipment
ASIP	Army Stationing and Installation Plan
ASL	authorized stockage list
ATE	automatic test equipment
AURS	automated unit reference sheets
avn	aviation
AVSCOM	United States Army Aviation Systems Command

B

BASOPS	base operations
BCS	Battery Computer System
BDP	Battlefield Development Plan
BII	basic issue items
BMAR	backlog of maintenance and repair
BMG	budget and manpower guidance
bn	battalion
BOI	basis of issue
BOIP	basis-of-issue plan
BOIPFD	basis-of-issue plan feeder data
BPPBES	Biennial Planning, Programming, Budgeting Execution System
BTMS	Battalion Training Management System
BY	budget year

C

CBRS	Concept-Based Requirements System
CCNUM	command control number
CD	combat development/developer
CNETP	Consolidated New-Equipment Training Plan
COB	Command Operating Budget
COHORT	Cohesion, Operational Readiness Training
compt	comptroller
COMSEC	communications security
CONUS	Continental United States
coord	coordination
CPX	command post exercise
CRRC	Construction Requirements Review Committee
CSM	command sergeant major
CTA	common table of allowances
CTG	command training guidance
CTU	consolidated TOE update

D

DA	Department of the Army
----	------------------------

DAMPL	Department of the Army Master Priority List
DCSOPS	Deputy Chief of Staff for Operations and Plans
DDESB	Department of Defense Explosives Safety Board
DEH	Directorate of Engineering and Housing
DET	displaced equipment training
DETP	Displaced Equipment Training Plan
DF	displaced form; disposition form
DFE	Directorate of Facilities Engineering
DG	defense guidance
DIO	Directorate of Industrial Operations
DISCOM	division support command
DIVARTY	division artillery
DLA	Defense Logistics Agency
DLP	doctrine and literature program
DMFP	Draft Materiel Fielding Plan
DMMC	Division Materiel Management Center
DOCMOD	Documentation Modernization
DOD	Department of Defense
DPCA	Director(ate) of Personnel and Community Activities
DS	direct support
DTT	doctrine and tactics training
DY	design year

E

E-date	effective date
EMF	enlisted master file
EOH	equipment on hand
ERC	equipment readiness criteria
ERPSL	Essential Repair Parts Stockage List
ES	end strength
EUSA	Elghth United States Army (Korea)

F

FAA	Functional Area Assessment(s)
FAASV	Field Artillery Ammunition Support Vehicle
FAS	Force Accounting System
FC	Fielding Command
FE	facilities engineer
FHMA	Family Housing Management Account

FI	force integration
FIA	Force Integration Analysis
FIAO	Force Integration Analysis Office
FM	Field Manual
FMMP	Force Modernization Master Plan
FORSCOM	United States Army Forces Command
FRET	fielding requirements data base
FSA	force structure allowance
FSP	facility support plan
FTX	field training exercise
FUE	first unit equipped
FUED	first-unit-equipped date
FY	fiscal year
FYDP	Five-Year Defense Plan

G

GC	gaining command
GDP	general defense plan
GLLD	ground laser location designator
GS	general support
GSA	General Services Administration
GSR	ground surveillance radar
GY	guidance year

H

HAC	House Appropriations Committee
HASC	House Armed Services Committee
HEMTT	Heavy Expanded Mobility Tactical Truck
HQDA	Headquarters, Department of the Army
HSC	United States Army Health Services Command

i

ICP	Incremental Change Package
IET	Initial-entry training
IG	Inspector general
ILO	In-lieu-of
ILS	Integrated logistic support
IM	Intensively managed
IMS	Intensively managed system
INSCOM	United States Army Intelligence and Security Command
IPR	In-process review
ISC	United States Army Information Systems Command

ISS	Integrated systems support	MMCA	Minor Military Construction, Army
ITAADS	Installation, The Army Authorization Documents System	MMR	maintenance management review
ITOE	Intermediate Table(s) of Organization and Equipment	MOC	management of change
		MOS	military occupational specialty
		mo(s)	month(s)
		MOSC	military occupational specialty code
		MP	military police
		MRIS	Modernization Resource information Submission
JCS	Joint Chiefs of Staff		
JSPD	Joint Strategic Planning Document	MRL	materiel requirements list
JTA	Joint table(s) of allowances	MRSA	Materiel Readiness Support Activity
		MSC	major subordinate command
		MSP	mission support plan
		MTP	mission training plan
		MTOE	modification table(s) organization and equipment
		MWO	modification work order(s)
			N
		NATO	North Atlantic Treaty Organization
LAO	logistic assistance officer	NBC	nuclear, biological, chemical
LCA	Logistic Control Activity	NDI	nondevelopmental item
LCSMM	Life Cycle System Management Model	NET	new-equipment training
LEA	Logistics Evaluation Agency	NETP	new-equipment training plan
LIC	language identifier code	NETT	new-equipment training team
LIF	Logistics Intelligence File	NGB	National Guard Bureau
LIN	line item number	NICP	national inventory control point
LOGSACS	Logistics Structure and Composition System	NSN	national stock number
LOI	letter of instruction	NTC	national training center
LON	letter of notification		
LRFIP	Long-Range Force Integration Plan		
LTOE	living TOE		
			O
		OCE	Office of the Chief of Engineers
		OCONUS	outside continental United States
		ODCSOPS	Office, Deputy Chief of Staff for Operations and Plans
		ODCSPER	Office, Deputy Chief of Staff for Personnel
MAA	Mission Area Analysis	OMA	Operation and Maintenance, Army
MACOM	Major Army Command	OMB	Office of Management and Budget
MAD	Materiel Assistance Designated (Report)	OMF	officer master file
MAE	mission accomplishment estimate	O&O	operational and organizational
MARC	Manpower Requirement Criteria	OPD	Officer Personnel Directorate, MILPERCEN
MATDEV	Materiel Developer		
MCA	Military Construction, Army	OPLAN	operations plan
MCAR	Military Construction, Army Reserve	ORF	operational readiness float
MCARNG	Military Construction, Army National Guard	OSD	Office of the Secretary of Defense
METT-T	mission, enemy, terrain, troops, and time available		
MFA	materiel fielding agreement		
MFP	Materiel Fielding Plan		
MFT	materiel fielding team		
MILCON	military construction		
MLRS	multiple-launch rocket system		

OSE organizational support equipment
 OSHA Occupational Safety and Health Agency

P

PAA Procurement of Ammunition, Army
 PADS Position and Azimuth Determining System
 PARR Program Analysis and Resource Review
 PAX programming, administration, and execution
 PBAC Program Budget Advisory Committee
 PBAG Program Budget Advisory Group
 PBD Program Budget Decision
 PBG Program Budget Guidance
 PCA production contract award
 PCS permanent change of station
 PDIP Program Development Increment Package
 PDM Program Decision Memorandum
 pdn production
 PDSS post-deployment software support
 PERSACS Personnel Structure and Composition System
 PFCA Programmed Force Capability Analysis
 PIP product improvement programs
 PLL prescribed load list
 PM program manager
 POC point of contact
 POI program(s) of instruction
 POL petroleum, oils, and lubricants
 POM Program Objective Memorandum
 POMCUS pre-positioning of materiel configured to unit sets
 PPBES Planning, Programming, Budgeting, and Execution System (Army system)
 PPBS Planning, Programming, and Budgeting System (DOD system)
 pub publication
 PY program year

Q

QQPRI qualitative and quantitative personnel requirements information
 QTB quarterly training briefs

R

RC Reserve Component
 RCF repair-cycle float
 RDTE research, development, test, and evaluation experimentation
 REFORGER Return of Forces to Germany
 RPMS Real Property Management System
 rqmts requirements

S

SAC Senate Appropriations Committee
 SACS Structure and Composition System
 SASC Senate Armed Services Committee
 SB supply bulletin
 SC supporting command
 SF standard form
 SFA support facility annex
 SIDPERS Standard Installation/Division Personnel System
 SINGARS Single Channel Ground and Airborne Radio System
 SL skill level
 SLAC Support List Allowance Card
 SME subject matter expert
 SOFA Status of Forces Agreement
 SPBS Standard(ized) Property Book System
 SQI special qualifications identifier(s)
 SQT skill qualification test
 SRC standard requirement(s) code
 ST sustainment training
 STTE special tools and test equipment
 SUPCOM support command

T

TAA Total Army Analysis
 TAADS The Army Authorization Documents System
 TACOM Tank Automotive Command
 TAEDP Total Army Equipment Distribution Program
 TAPA US Army Total Army Personnel Agency
 TAP The Army Plan
 TARP Theater Army Rebuild Program
 TC training circular
 TDA table(s) of distribution and allowances
 tech technology

Glossary

TM technical manual
TMDE test, measurement, and diagnostic equipment
TOE table(s) of organization and equipment
TPF total package fielding
TPS test program sets
TPSN troop program sequence number
TPUMF Total Package Unit Materiel Fielding
TRADOC United States Army Training and Doctrine Command
TRAS Training Requirements Analysis System
TROSCOM United States Army Troop Support Command
TTHS trainees, transients, holdees, and students

U

UIC unit identification code
UMFP unit materiel fielding point
USAMC United States Army Materiel Command
USAR United States Army Reserve
USAREC United States Army Recruiting Command
USAREUR United States Army, Europe
USR unit status report

V

VFAS Vertical Force Accounting System

W

WESTCOM United States Army Western Command

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AR 220-1 Unit Status Reporting

AR 310-25 Dictionary of U.S. Army Terms (LV)

AR 310-31 Management System for Tables of Organization and Equipment
(The TOE System)

AR 310-49 The Army Authorization Documentation System (TAADS)

AR 350-35 Army Modernization Training

AR 600-83 The New Manning System

AR 700-127 Integrated Logistics Support

AR 700-XX Materiel Release, Fielding, and Transfer

CTA 50-909 Field and Garrison Furnishing and Equipment

DA Pamphlet 5-25 (U) Army Modernization Information Memorandum

DA Pamphlet 5-25-1 (C) The Army Modernization Information Memorandum (U)

DA Pamphlet 700-XXA Instructions for Materiel Release, Fielding, and Transfer

FM 25-100 Training the Force

FM 100-5 Operations

FM 101-5 Staff Organization and Operations

SB 700-20 Army Adopted/Other Items
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